

CONSTELLATION USERS GUIDE

CHIEF'S LIMITED ONE-YEAR WARRANTY & LIABILITY

Chief Automotive Technologies warrants for one year from the date of installation and/or purchase any of its products which do not perform satisfactorily due to defect caused by faulty material or workmanship. Chief's obligation under this warranty is limited to the repair or replacement of products which are defective and which have not been misused, carelessly handled, or defaced by repairs made or attempted by others.

CHIEF AUTOMOTIVE TECHNOLOGIES DOES NOT ASSUME RESPONSIBILITY FOR ANY DEATH, INJURY OR PROPERTY DAMAGE RESULTING FROM THE OPERATOR'S NEGLIGENCE OR MISUSE OF THIS PRODUCT OR ITS ATTACHMENTS. CHIEF MAKES NO WRITTEN, EXPRESS OR IMPLIED WARRANTY WHATSOEVER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE REGARDING THE EQUIPMENT OR ANY PART OF THE PRODUCT OTHER THAN THE LIMITED ONE-YEAR WARRANTY STATED ABOVE.

Site Requirements VHSS

Unloading:

- *Place Vehicle and trailer on solid level parking area.
- *Set vehicle parking brake.
- *Secure trailer with wheel chocks provided.
- *Carefully open trailer ramp door, as load may shifted.
- *Always keep ramp door clear of debris and weather elements.

Bay location:

- *Recommend bay size for rig: 20ft wide x 40ft long x 11ft high
- *Recommend bay size for tent: 30ft wide x 42ft long x 16ft high
- *Floor surface: Do Not use on asphalt, only clean, smooth, hard concrete surface.
- *Floor pitch: Maximum allowed floor slope is 1/8" per foot
- *Electrical Requirements: Use, separate 15A-120V circuit for each power strip. Only use 2-100ft power cords provided, (1) 100ft power cord per power strip.
- *Electrical Connections: Follow Drawing #WD102 for Power Strip connection and all electrical device connections.

OPERATING CONDITIONS: Rig is not intended for outdoor use or storage and has an operating ambient temperature range of 41°-104°F (5°-40°C). This product is intended for indoor use only in a dry location.

LIFT LOCKOUT/TAGOUT PROCEDURE

Purpose

This procedure establishes the minimum requirements for the lockout of energy that could cause injury to personnel by the operation of equipment in need of repair or being serviced. All employees shall comply with this procedure.

Responsibility

The responsibility for assuring that this procedure is followed is binding upon all employees and service personnel from outside service companies (i.e., Authorized Installers, contactors, etc.). All employees shall be instructed in the safety significance of the lockout procedure by the facility owner/manager. Each new or transferred employee along with visiting outside service personnel shall be instructed by the owner/manager (or assigned designee) in the purpose and use of the lockout procedure.

Preparation

Employees authorized to perform lockout shall ensure that the appropriate energy isolating device (i.e., circuit breaker, fuse, disconnect, etc.) is identified for the lift being locked out. Other such devices for other equipment may be located in proximity of the appropriate energy isolating device. If the identity of the device is in question, see the shop supervisor for resolution. Assure that proper authorization is received prior to performing the lockout procedure.

Sequence of Lockout Procedure

- 1) Notify all affected employees that a lockout is being performed and the reason for it.
- 2) Unload the subject equipment. Shut it down and assure the disconnect switch is "OFF" if one is provided.
- 3) The authorized lockout person operates the main energy isolation device removing power to the subject lift.
- If this is a lockable device, the authorized lockout person places the assigned padlock on the device to prevent its unintentional reactivation. An appropriate tag is applied stating the person's name, at least3" x 6" in size, an easily noticeably color, and states not to operate device or remove tag.
- If this device is a non-lockable circuit breaker or fuse, replace with a "dummy" device and tag it appropriately as mentioned above.
- 4) Attempt to operate equipment to assure the lockout is working. Be sure to return any switches to the "OFF" position.
- 5) The equipment is now locked out and ready for the required maintenance or service.

Restoring Equipment to Service

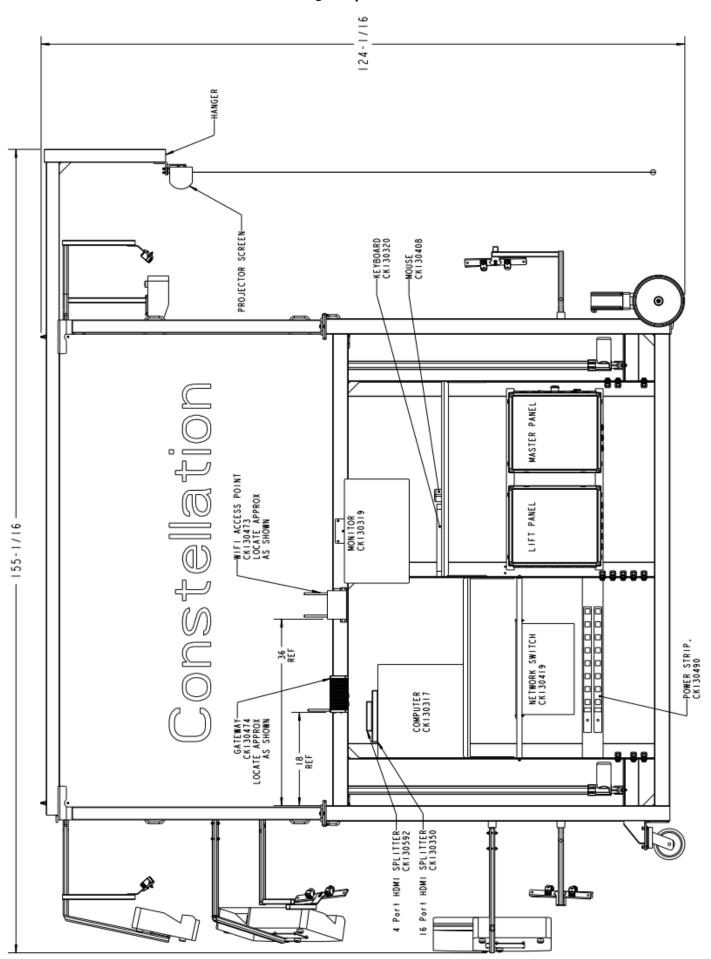
- 1) Assure the work on the equipment is complete and the area is clear of tools, vehicles, and personnel.
- 2) At this point, the authorized person can remove the lock (or dummy circuit breaker or fuse) & tag and activate the energy isolating device so that the equipment may again be placed into operation.

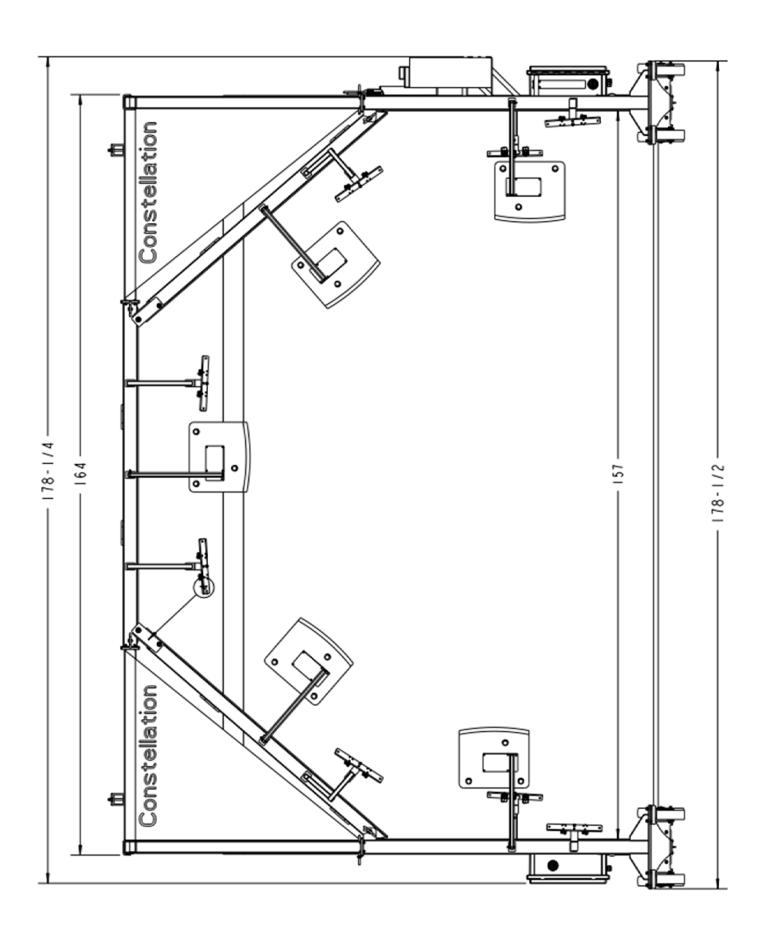
Rules for Using Lockout Procedure

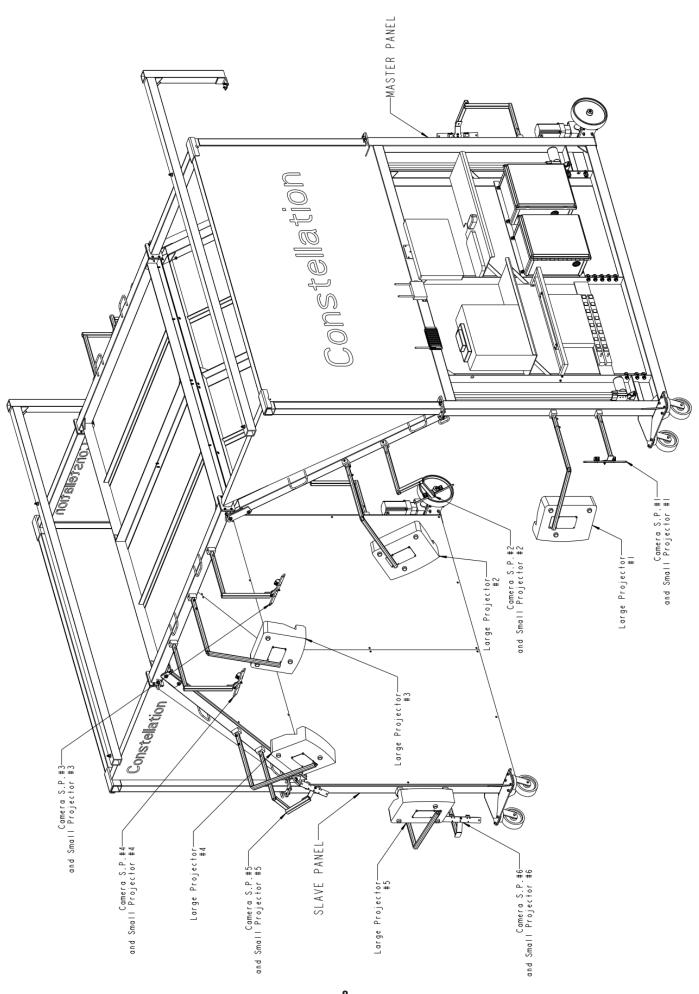
Use the Lockout Procedure whenever the lift is being repaired or serviced, waiting for repair when current operation could cause possible injury to personnel, or for any other situation when unintentional operation could injure personnel. No attempt shall be made to operate the equipment when the energy isolating device is locked out.

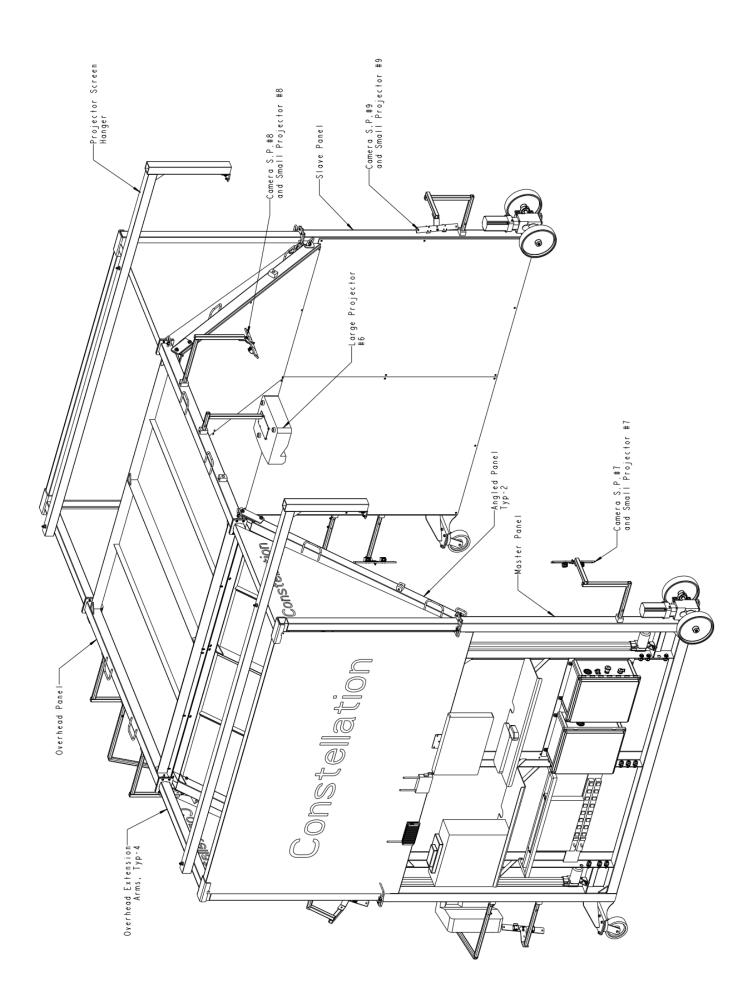
SAFETY INSTRUCTIONS

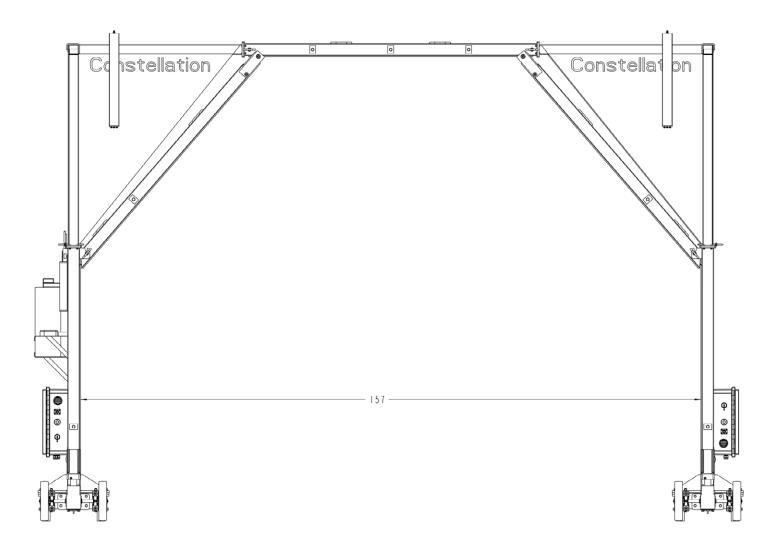
- *Inspect your Rig daily. Never operate if it malfunctions or if it has broken or damaged parts. Use only qualified Genuine OEM Parts to make repairs.
- *Thoroughly train all employees in use and care of Rig, using manufacturer's instructions supplied.
- * Never allow unauthorized or untrained persons to position vehicle or operate Rig.
- *Prohibit unauthorized persons from being in shop area while Rig is in use.
- *DO NOT permit anyone inside vehicle when it is being used for Scanning.
- *Never run over cords.
- *Always inspect power cords and grounding lugs.
- *Never use power cord if grounding lugs has been altered or removed.
- *Always keep area in and around Rig free of tools, debris.
- *Always confirm vehicle size to be scanned, Scan only cars and Light trucks, subject to changes with lift kits, etc.
- * Keep vehicle centered between Rig panels. **DO NOT** hit or run into Rig, Projector arm/Camera Arms. This could damage Rig or vehicle. Before driving vehicle into area, position Rig to provide unobstructed entrance onto bay area.
- *Always set Parking Brake before existing vehicle.
- *Remain clear of Rig and vehicle when scanning.
- *Confirm Projector Screen has been raised before returning Rig to home position.
- * Position Rig to home providing an unobstructed exit before removing vehicle from bay area.
- *DO NOT perform any maintenance on the control panels until the power has been shut off to the Rig.
- *DO NOT operate equipment with a damaged cord or if any part of the equipment has been dropped or damaged.
- *Always lower panels onto orange locking Pins provided.
- * Confirm all E-stops work before operating lift.
- *Only use Generator provided with Rig. Generator must be placed outside in well ventilated area.
- *Generator includes Ground fault system, only use Flat Generator Extension cord provided. 125V Twist -Lock Plug (L14-30P) to (4x) 5-20R 125V Receptacles.
- *WARNING, permit only trained personnel to operate Rig. After reviewing these instructions, become familiar with the controls by running the Rig through a few cycles before Scanning a vehicle. Always Observe and heed SAFETY and WARNINGS.
- ***WARNING**, This Rig has internal arcing or sparking parts. To minimize the Risk of Explosion, **DO NOT** expose to flammable vapors.
- **DO NOT** use Rig in a manner other than intended. Included (but not limited to) examples of unapproved uses of the Rig are operating on incorrect floor surface, to small area, incorrect voltage or electrical source.









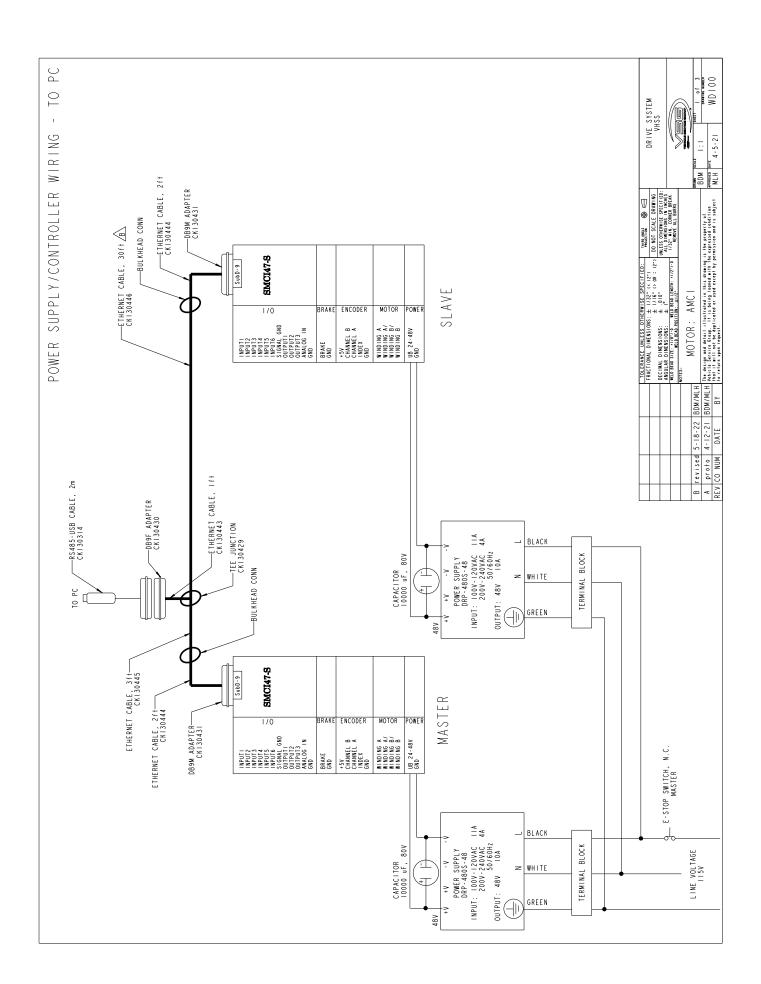


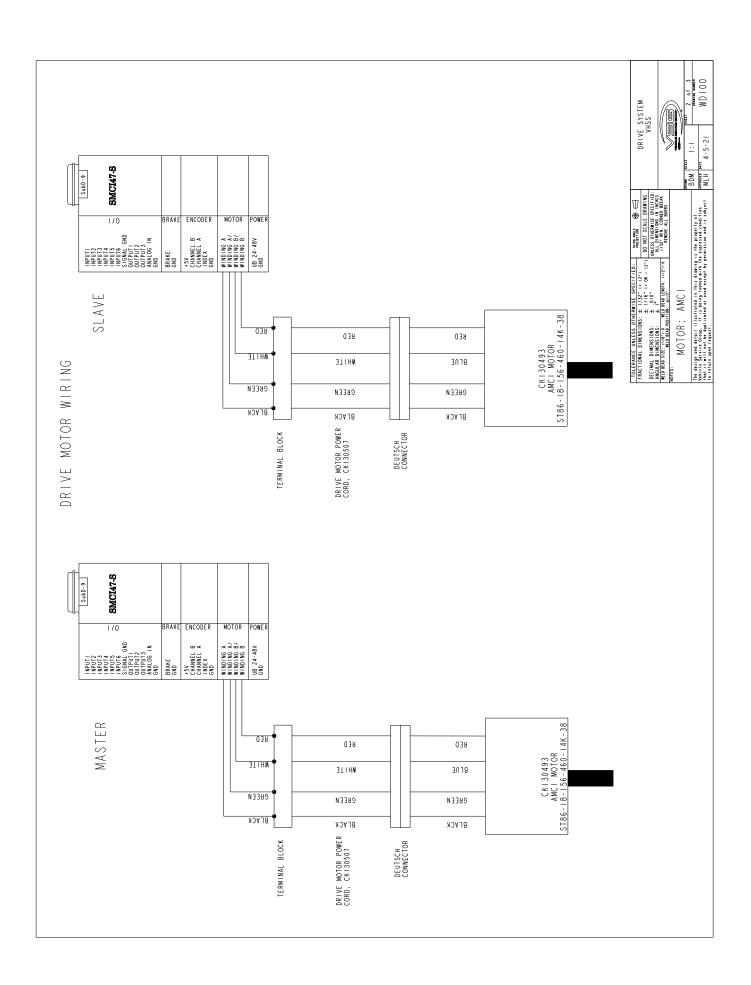
- *Place Master Panel in left side of bay.
- *Place Slave Panel in right side of bay, space Slave Panel approx. 157" as shown.
- *Place Overhead panel in center of bay, placed on tool cart. Insert (4) Overhead extension arms into ends of overhead panel. Place orange lock pin to locate correct spacing.
- *Two persons required, hoist overhead panel and extension arms, place onto Master panel and Slave panel corners.
- *Use 3/8-16 x 3-1/2" BHCS to attach Overhead extension arms to Master Panel and Slave Panel at each of the four corners.
- *Hang LH angled panel to overhead panel and allow it to hang, standing vertical.
- *Hang RH angled panel to overhead panel and allow it to hang, standing vertical.
- *Assemble Large Projector to arms. Attach large projector and arms to Rig using clevis pins provided in correct order as shown in previous illustrations. Number 1-5 across the front from left to right and number 6 centered in the rear.
- *Assemble camera rail to camera arms, by matching numbers of rails to arms. NOTE: top of camera to face PVC board or interior surface of Rig. Attach camera and arms to Rig using dowel and recess provided, Secure with 5/16 SHCS in correct order as shown in previous illustrations. Number 1-6 across front from left to right and number 7-9 across rear from left to right.

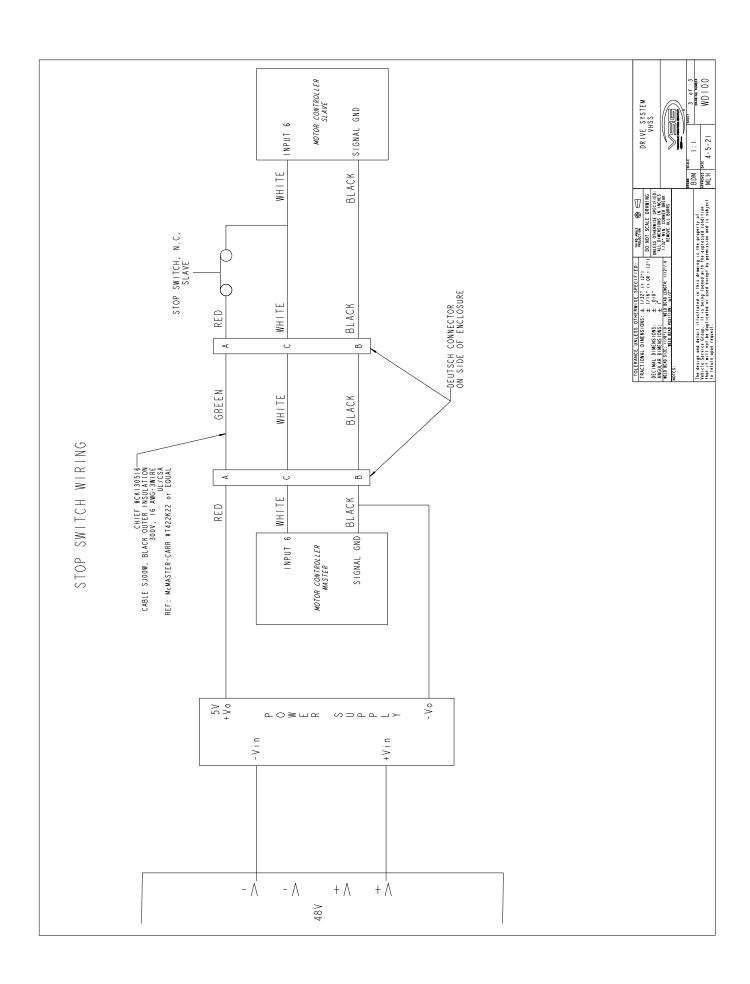
- *Attach Power Strips to Velcro patches provided, Ref WD102 for locations and connections.
- *Route power cord located at rear left corner of rig, follow pitch of angled panels over top and connect to pig tail from power box located on right rear corner of rig.
- *Route E-stop cord located at rear left corner of rig, follow pitch of angled panels over top and connect to power box located on right rear corner of rig.
- *Route Motor Drive controller cord located at rear left corner of rig, follow pitch of angled panels over top and connect to power box located on right rear corner of rig.
- *Large Projector HDMI cables, match large projector number to HDMI cable numbers. Plug matching cable numbers into large projector. Route other cable ends to computer, NOTE: do not plug into computer at this time. Ref WD098
- *Small Projector HDMI cables, match small projector number to HDMI cable numbers. Plug matching cable numbers into small projector. Route other cable ends to splitters, NOTE: do not plug into splitter at this time. Ref WD098
- *Camera Ethernet cables, match Camera's S.P. 1-9 with Ethernet cable numbers. Plug matching cable number into camera and Network Switch. Ref WD097
- *Power on all projectors.
- *Plug Small projector cables into Splitter. S.P. camera 1-6 connects to 16 port splitter, S.P. camera 7-9 connects to 4 port splitter.
- *Power on 16 port splitter and 4 port splitter.
- *Turn on Computer, navigate to Display Settings.
- *Connect items in order as stated: plug monitor, 4 port splitter, 16 port splitter, HDMI large projector cable into computer, wait for display to appear on monitor. Continue with process with all cables. Note, always plug one cable and wait before proceeding to next cable.

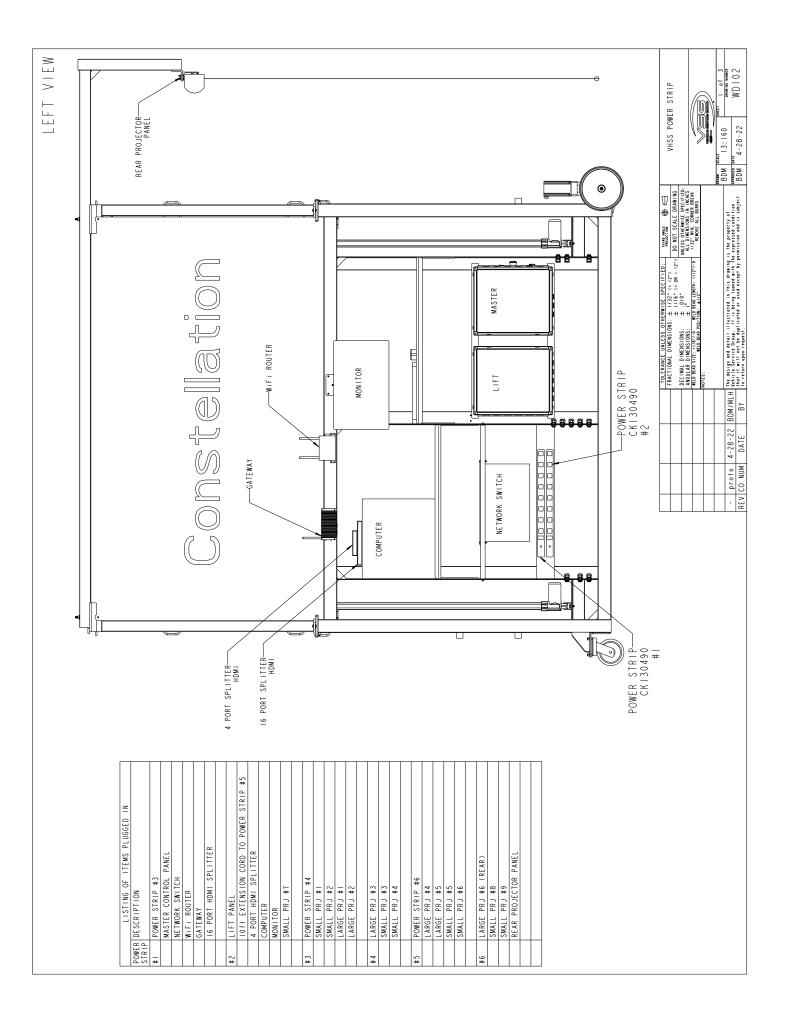


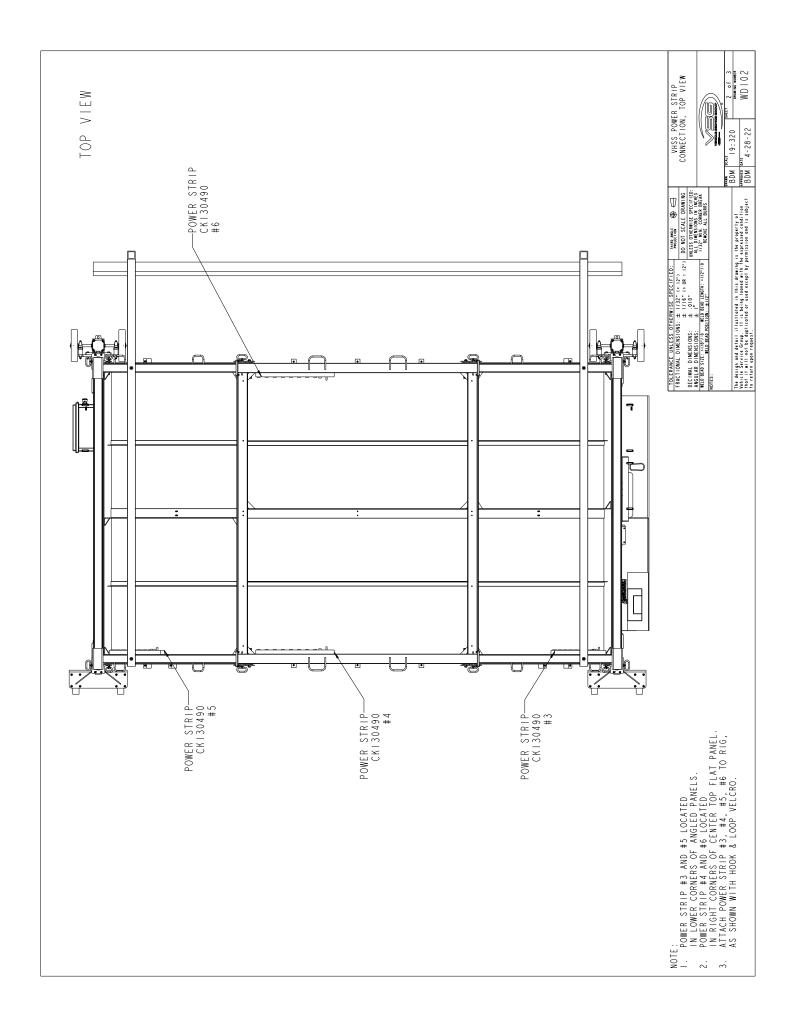
- *Refer to WD095 for connecting Computer to motor controller and "T-adapters"
- *Place projector screen hangers on top of rig and align with 4 holes provided. Secure in place with (4) 3/8 x 6" HHCS, nut and washer. Hang rear projector screen, align grooved tracks on back side of screen with hangers. Center screen with Rig. Use green cable for Ethernet connection to slave panel box.
- *Connect raise power cable to slave panel side. Route cable over top of rig. Follow pitch of angled panels, Ref WD096
- *Open Lift panel box, flip 4 switches to on. Using the raise/lower switch, hold switch in the up position to raise overhead section of Rig. Carefully while raising, watch the 4 corners and maintain a level hoist. If necessary, turn off fast corner and allow other corner to catch up. Raise until hole is visible in the four corner legs. Once the hole is visible, place orange locking pin through hole.
- *(Two persons required) Swing each angled panels into place and align hole in angled panel with hole in side panels. Place orange locking pins through each hole at 4 corners. Note, this step may require overhead to be raised or slightly lowered in to align holes.
- * After orange pins are placed into position, lower overhead assembly onto locking pins.
- *Connect printer to Computer
- *Computer application startup procedures:
- --Open docker, ensure all segments are green and running proper.
- --Open Hail Scan App, confirm all projectors are assigned correctly.
- --Open Rig Calibration App, confirm all cameras provide proper feedback.
- *Using Rig calibration App, complete V2 calibration.
- *Close all Apps, Re-Open Vehicle Hail Scan App to confirm nothing is projected or displayed on screens other than what is required.
- *Power on tablets, connect to designated wifi.
- *Open Constellation App with tablet, confirm connection to computer.
- *Run test scan.

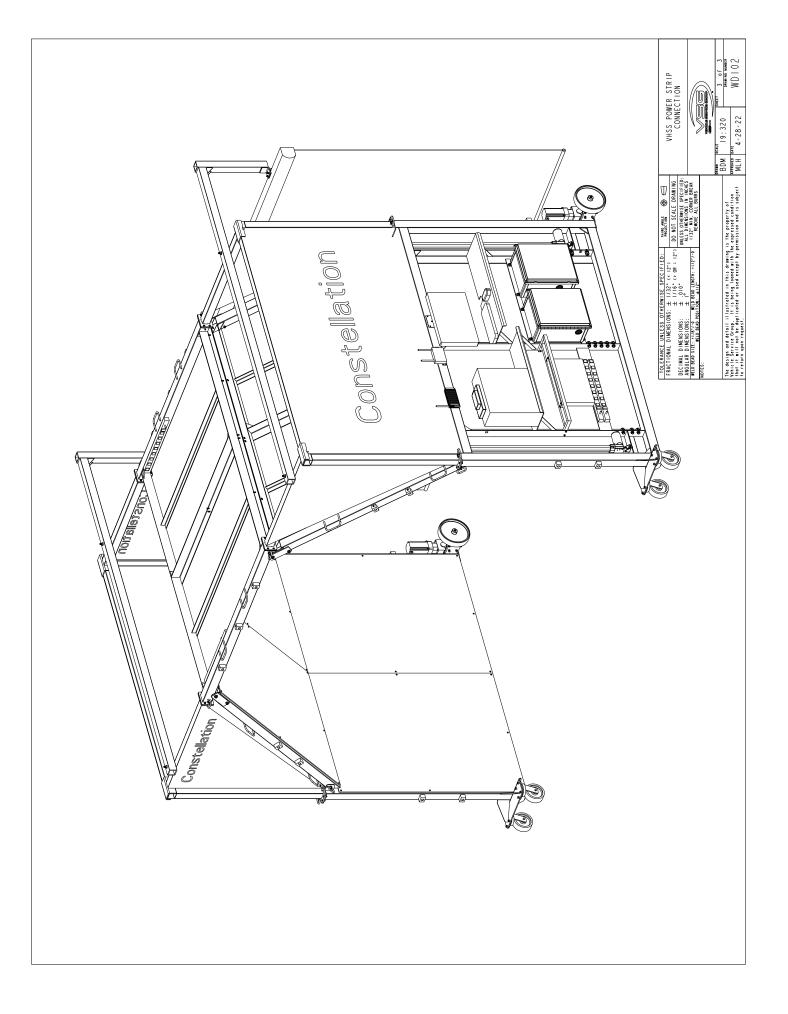


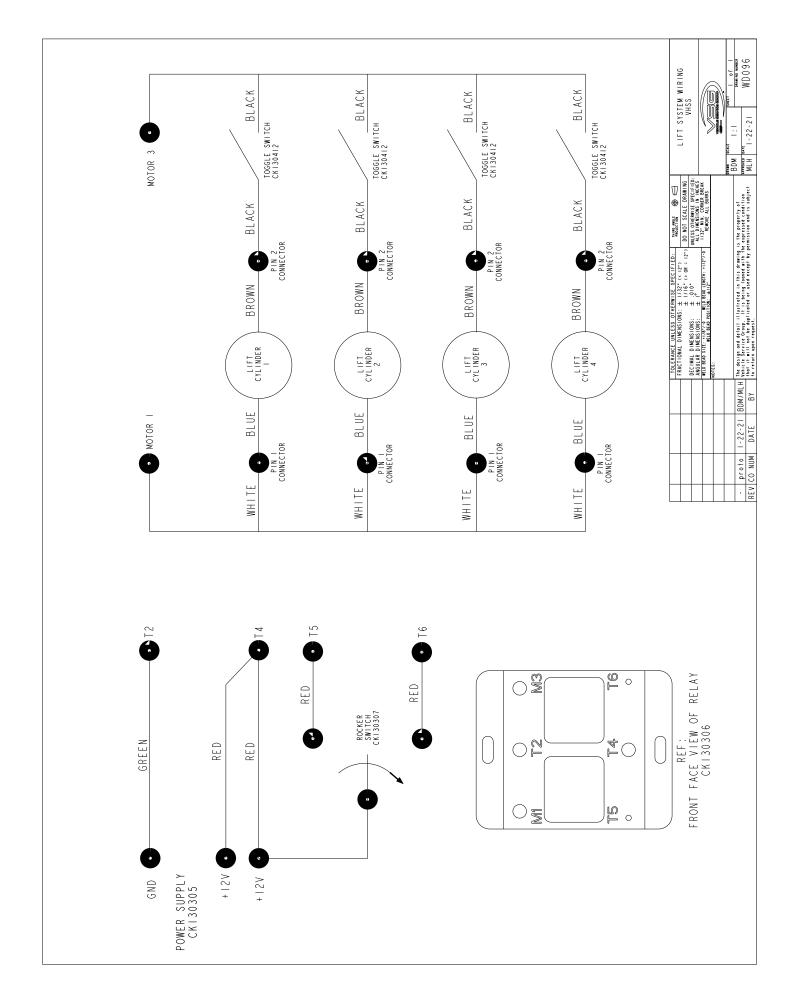


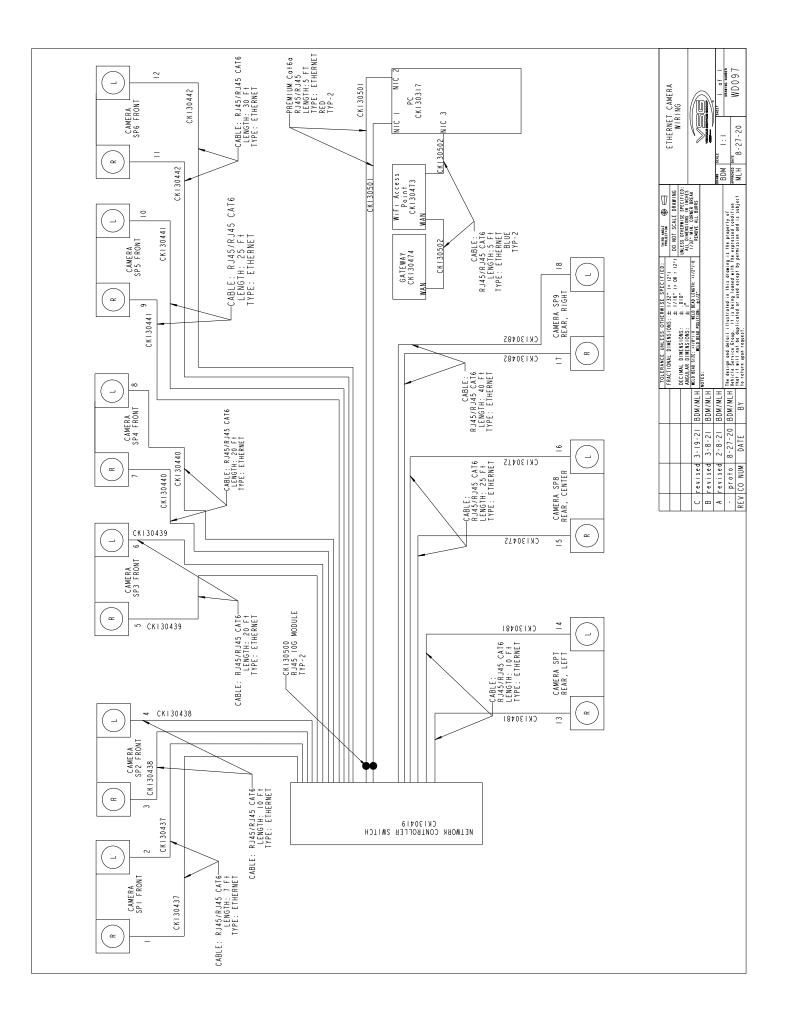


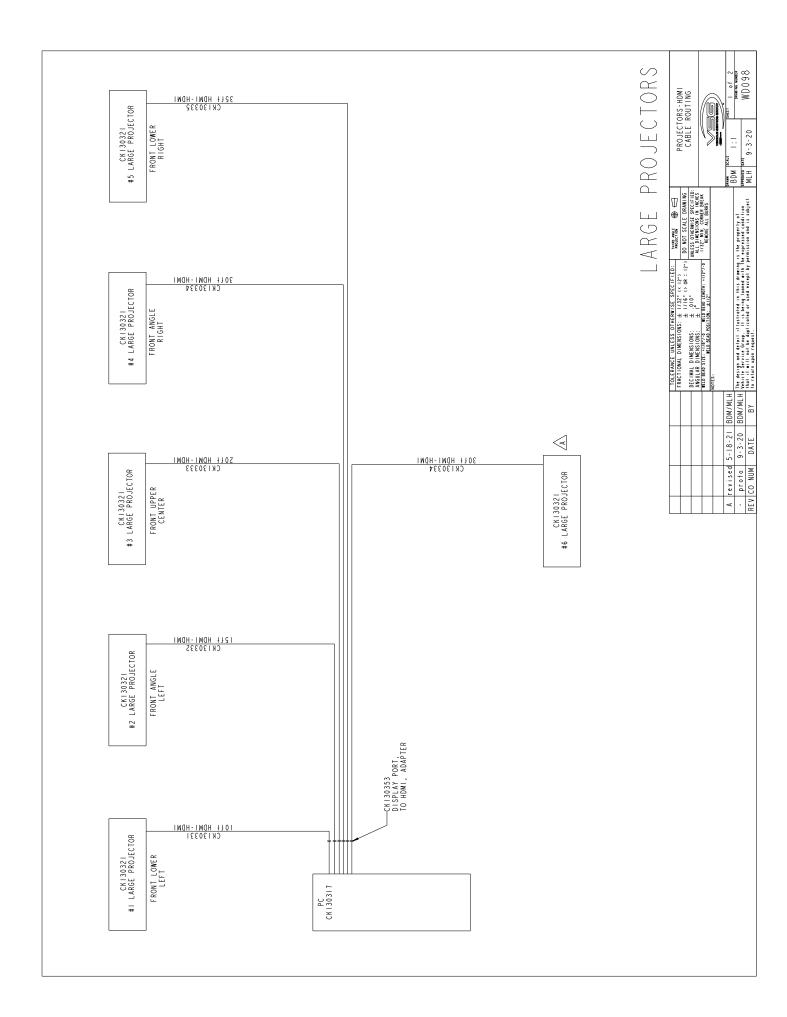


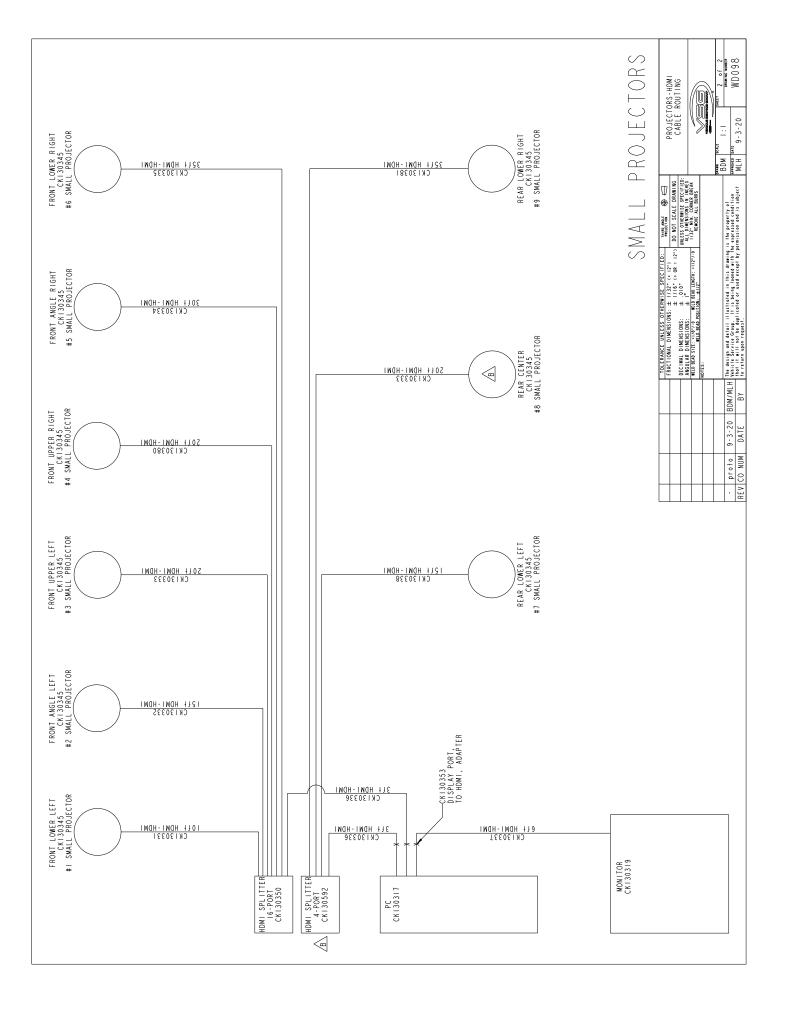












Large Projector Settings

OSD Menu Tree

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
					Presentation
					Bright
					HDR
					HLG
		Dianley Made			Cinema
		Display Mode			sRGB
					DICOM SIM.
					Blending
					User
					3D
					Off [Default]
					Blackboard
					Light Yellow
		Wall Color			Light Green
					Light Blue
Display	Image Settings				Pink
טוטpilay	illiage Settings				Gray
			HDR/HLG		Off
					Auto [Default]
			HDR Picture Mode		Bright
					Standard [Default]
		Dynamic Range			Film
		Dynamic mange			Detail
			HLG Picture Mode		Bright
					Standard [Default]
					Film
					Detail
		Brightness			0
		Contrast			0
		Sharpness			10
		Color			-50 ~ 50
		Tint			-50 ~ 50

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
			Film		
			Video		
			Graphics		
		0	Standard (2.2)		
		Gamma	1.8		
			2.0		
			2.4		
			2.6		
			Brilliant ColorTM		10
					Warm
			Color		Standard
			Temperature		Cool
					Cold
			Color	R [Default]	
					G
			Color Matching		В
					С
					Υ
D: 1	Image				M
Display	Settings				W
				Hue	-50 ~ 50 [Default: 0]
				Saturation	-50 ~ 50 [Default: 0]
		Calan Cattiana		Gain	-50 ~ 50 [Default: 0]
		Color Settings		Reset	Cancel [Default]
					Yes
				Exit	
				Red Gain	0
				Green Gain	0
				Blue Gain	0
				Red Bias	0
			RGB Gain/Bias	Green Bias	0
				Blue Bias	0
				Reset	Cancel [Default]
					Yes
				Exit	
					Auto [Default]
			Color Space [Not HDMI Input]		RGB
			Tibivii iiiputj		YUV

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
					Auto [Default]
			O L O TURNUL J		RGB(0~255)
		Color Settings	Color Space [HD	Auto [Default] RGB(0~255) RGB(16~235) YUV Off On [Default] Jency ase O~31 (depends on signal) [Default: 0] sition John Sition John Sition Off / On (0~70%) Off / On (0~70%)	
					YUV
			At		Off
			Automatic		On [Default]
Image Settings			Frequency		
		Signal	Phase		0~31 (depends on signal) [Default: 0]
		H. Position			
			V. Position		-50 ~ 50 (depends on signal) [Default: 0]
			Dynamic Black		Off / On (0~70%)
		Brightness	Eco.		
		Mode	Constant Power		100
	Enhanced		Constant Luminance		85%~30%, 5% per step
		Reset			
					On
	Gaming				Off [Default]
Display		3D Mode			Off
					On [Default]
					DLP-Link [Default]
		05 10011			Off
		3D - 2D			
					R
	3D				Auto [Default]
		3D Format			SBS
		3D Torrilat			Top and Bottom
					Frame Sequential
		3D Sync Invert			On
		3D Sylic lilvert			Off [Default]
		Doost			Cancel [Default]
		Reset			Yes
					4:3
					16:9
	A a m = = # D : C :				16:10
	Aspect Ratio				LBX
					Native
					Auto [Default]

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
	Edge Mask				[Default: 0]
	Zoom				[Default: 0]
	Digital Lens Shift	V			[Default: 0]
	Image Shift			[Default: 0]	
	Image Snitt	V			[Default: 0]
Display					
		H Keystone			-40 ~ 40 steps (-10~10 degree) [Default: 0]
		V Keystone			-40 ~ 40 steps (-10~10 degree) [Default: 0]
	Reset				
					Auto [Default]
	Audio Settings				Internal Speaker
					Audio Out
	Muto				Off [Default]
Audio	iviute				On
	Mic				Off
	IVIIC				On [Default]
	Volume				[Default: 5]
	Mic Volume				[Default: 5]
					Front [Default]
	Projection				Rear 👞
					Ceiling-top •
					Rear-top • 7=
	Saraan Tuna				16:9
	эстеен туре				16:10 [Default]
		Filter Usage Hours			(read only)
		Optional Filter			Yes
Setup		Installed			No [Default]
					Off
	Filter Settings				300hr
		Filter Reminder			500hr [Default]
		neiiiiidei			800hr
					1000hr
		Filton Doort			Cancel [Default]
		Filter Reset			Yes
	Douges Cattle -	Direct Power			Off [Default]
	Power Settings	On			On

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
		Signal Dower On			Off [Default]
		Signal Power On			On
		Auto Power Off (min.)			[Default: 20]
	Power Settings				[Default: 0]
		Sleep Timer (min.)	Alexanda On		No [Default]
		(111111.)	Always On		Yes
		Power Mode			Active
		(Standby)			Eco
		Coourity			Off [Default]
		Security			On
	Coouritus		Month		
	Security	Security Timer	Day		
			Hour		
		HDMI Link			Off
Setup					On
		Inclusive of TV			No
					Yes
	HDMI Link Settings	Power On Link			Mutual
	Settings				PJ - Device
					Device - PJ
		Danner Off Limb			Off
		Power Off Link			On
					Green Grid
					Magenta Grid
	Test Pattern				White Grid
					White
					Off [Default]
	Remote Settings	ID Formed			On [Default]
	[depends on remote]	IR Function			Off
	Telliote]	Remote Code			00

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
					Test Pattern
					Brightness
					Contrast
					Sleep Timer
		F1			Color Matching
					Color Temp
					Gamma
					Projection
					Digital Lens Shift [Default]
					Test Pattern
	Remote Settings [depends on remote]	F2			Brightness [Default]
					Contrast
					Sleep Timer
Setup					Color Matching
					Color Temp
					Gamma
					Projection
					Digital Lens Shift
					Test Pattern
					Brightness
					Contrast
					Sleep Timer [Default]
		F3			Color Matching
					Color Temp
					Gamma
					Projection
					Digital Lens Shift
	Projector ID				00

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
					English [Default]
	U Sub Menu Options				Deutsch
					Français
					Italiano
					Español
					Português
					Polski
					Nederlands
					Svenska
					Norsk/Dansk
					Suomi
					繁體中文
					簡体中文
		Language			日本語
					한국어
					Русский
					عـربي
					Magyar
Setup	Ontions				Ceština
	Ориона				عـربي
					ไทย
					Türkçe
					فارســـى
					Tiếng Việt
					Bahasa Indonesia
					Română
					Slovenčina
					Top left 🔳
					Top right
			Menu Location		Center [Default]
		Manu	Location		Bottom left
		Menu Settings			Bottom right
					Off "note: always change 1st"
			Menu Timer		5sec
					10sec [Default]
		Auto Como			Off [Default]
		Auto Source			On

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
					HDMI1
		Input Source			HDMI2
					VGA
			1101/411		Default [Default]
			HDMI1		Custom
		Innut Nama	HDMIO		Default [Default]
		Input Name	HDMI2		Custom
			VGA		Default [Default]
			VUA		Custom
		Uiah Altituda			Off [Default]
		High Altitude			On
		Display Mode			Off [Default]
		Lock			On
	Options	Koypad Look			Off [Default]
		Keypad Lock			On
		Options Information Hide			Off [Default]
					On
Setup		Logo			Default [Default]
Setup					Neutral
					User
					None
					Blue [Default]
		Background Color			Red
					Green
					Gray
					Logo
			EDID Reminder		Off
			LDID Hellillidel		On [Default]
		HDMI Settings	HDMI 1 EDID		1.4 [Default]
		Tibivii Settiligs	HOWIT LOID		2.0
			HDMI 2 EDID		1.4
			TIDIVII Z LUID		2.0 [Default]
		Reset OSD			Cancel [Default]
	Reset	Hesel OSD			Yes
	116961	Reset to Default			Cancel [Default]
		Heset to Delault			Yes

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
		Network Status			(read only)
		MAC Address			(read only)
		DUCD			Off [Default]
		DHCP			On
	LAN	IP Address			192.168.0.100 [Default]
		Subnet Mask			255.255.255.0 [Default]
		Gateway			192.168.0.254 [Default]
		DNS			192.168.0.51 [Default]
		Reset			
					Off
		Crestron			On [Default]
					Note: Port 41794
		Extron			Off
Network					On [Default]
					Note: Port 2023
					Off
		PJ Link			On [Default]
	Control				Note: Port 4352
	Control				Off
		AMX Device Discovery			On [Default]
		Discovery			Note: Port 9131
					Off
		Telnet			On [Default]
					Note: Port 23
					Off
		НТТР			On [Default]
					Note: Port 80

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
	Regulatory				
	Serial Number				
	Source				
	Resolution				00x00
	Refresh Rate				0.00Hz
	Display Mode				
	Power Mode (Standby)				
	Light Source Hours				
	Remote Code				00~99
Info	Remote Code (Active)				00~99
	Network Status				
	IP Address				
	Projector ID				00~99
	Filter Usage Hours				
	Brightness Mode				
		System			
	FW Version	LAN			
		MCU			

NOTES

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Chief reserves the right to alter product specifications and/or package components without notice.