

# **STOCK WEIGH**

# **SCALE HARDWARE**

MODEL SW3300 MODEL SW6600 MODEL SW7,000 MODEL SW10,000 MODEL SW14,000

INSTALLATION AND OPERATION GUIDE

<u>Digi-Star</u>

Ft. Atkinson, Wisconsin USA

# Digi-Star

Panningen, The Netherlands www.digi-star.com

D3746-US Rev E

MARCH 22, 2012

Digi-Star

# TABLE OF CONTENTS

INTRODUCTION	3
PRODUCT CHANGES AND IMPROVEMENTS	3
STOCK WEIGH SCALE COMPONENTS:	4
STOCKWEIGH SPECIFICATIONS	9
LOAD CELL DIMENSIONS	9
Model 3300	9
Model 6600	10
Model 7000	10
Model 10,000 Hybrid	11
Model 10,000	11
Model 14,000 Hybrid	12
Model 14,000	12
SW Platform – Wrangler – 90"	13
SW Platform – Wrangler Jr. – 54"	14
INSTALLATION	
10K/14K Load Cells	15
J-box Installation	17
Wrangler JR Deck Assembly	
MAINTENANCE	19
TROUBLESHOOTING GUIDE	20
TYPICAL WOOD PLATFORM CONSTRUCTION	
Model 3300 (3300 LB Gross Capacity)	
Model 6600 & 7000 (6600 & 7000 LBS Gross Capacity)	
REPAIR PARTS	
STOCK WEIGH 3300	
STOCK WEIGH 6600	27
STOCK WEIGH 6600	
Stock Weigh - 7,000 LBS	
Stock Weigh – 10,000 LBS	30
Stock Weigh – 14,000 LBS	31
J-Box Repair Parts	32
J-Box Repair Parts	
Wedge Mount	
WIRING DIAGRAM - LOAD CELL CONNECTOR	. 34

Digi-Star7

### INTRODUCTION

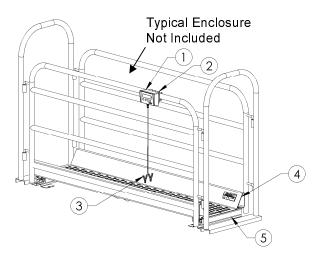
Congratulations on your purchase of a Digi-Star Stock Weigh scale system which is the simplest and most reliable animal weighing system on the market today. Due to the large number of load cell capacity options, Stock Weigh scale systems can be customized to fit your animal weighing needs. The indicator Auto-Lock feature allows scale to weigh active and restless animals within ±1% of actual weight. This manual will cover load cell and other hardware options available in Stock Weigh system. The load cells option available include following: SW3300 (3300 lbs capacity), SW6600 (6600 lbs capacity), SW7000 (7000 lbs capacity), SW10K (10,000 lbs capacity), SW14K (14,000 lbs capacity).

### PRODUCT CHANGES AND IMPROVEMENTS

We reserve the right to make changes in design, to add improvements to or otherwise modify our electronic scale products without incurring an obligation on goods previously purchased and to discontinue supplying any parts listed when the demand does not warrant production.



## STOCK WEIGH SCALE COMPONENTS:



### **KEY 1 - INDICATORS**

94.333	A B	C D E					
KEY	PART NUMBER	DESCRIPTION					
А	SM	/300 BATTERY OPERATED					
	404914	SW300 SCALE W/ 2 LOAD CELL CONNECTOR & WEDGE MOUNT					
	404915	SW300 SCALE FOR 2 BARE LEAD LOAD CELL CABLES & WEDGE MOUNT					
	405408 SW300 SCALE FOR 4 BARE LEAD LOAD CELL CABLES & WEDGE MOUNT						
В	403778	SW600 SCALE					
С	404588	SW2600 SCALE					
D	404589	SW4600EID SCALE					
E	405147	HORIZON XL					
	405148	HORIZON XLS					
	405149	HORIZON XLT					



#### KEY 2 - INDICATOR MOUNTING – FOR SW300 & SW600 SHIPPED WITH WEDGE MOUNT AS STANDARD

	A B C C C C C C C C C C C C C C C C C C	G				
RA	IL MOUNT	WING MOUNT	WEDGE MOUNT			
			STANDARD			
KEY	PART NUMBEF	R DESC	RIPTION			
Α	403769	BRACKET – STR TOP	MOUNT			
В	403980	BRACKET – ROBO MO	DUNTING			
С	403770	BRACKET – WING MC	DUNT			
D	405069	U-BOLT, 1/4-20 X 3.25 2	ZP			
E	403771	MODIFIED PLASTIC WEDGE MOUNT				
F	405124	PACK – WEDGE MOUNT BRACKET,				
		INCLUDES U-BOLTS 8	INCLUDES U-BOLTS & NUTS			
G	405084	NUT, 1/4-20 TOP LOCK	ING FLANGE			

#### KEY 2 - OPTIONAL RAM MOUNTING BRACKET OPTIONS FOR SW300 & SW600

	A		A B			
	M MOUNT		U-BOLT BASE	TWIST LOCK SUCTION		
S	TANDARD			CUP		
KEY	PART NUMBE	ER	DESCRIPTION			
А	A 403180		RAM MOUNT			
В	B 403179		MOUNT BASE-1" BALL U-BOLT			
С	404230		RAM SUCTION CUP W/TWIST LOCK			

Digi-Star

### KEY 2 - INDICATOR MOUNTING – FOR EZ2600 & EZ4600EID SHIPPED WITH WEDGE MOUNT AS STANDARD

	A,B C	F,B D,E	H,B G			
R	AIL MOUNT	WING MOUNT	WEDGE MOUNT (STANDARD)			
KEY	PART NUMBER	DESCRIPTION				
Α	404353	BRACKET-EZ3 PLASTIC RAIL				
В	403780	SCR-#10 X 5/8 FHSTS BLACK ZP				
С	840459	SUPPORT-HAT BRACKET				
D	405069	J-BOLT 1/4-20 X 3.25 ZP				
E	405084	NUT-1/4-20 TOP LOCKING FLANGE				
F	403770	BRACKET- WING MOUNT				
G	405124	PACK-WEDGE MOUNT BRACKET WITH U-				
		BOLTS & FLANGE NUTS				
H	405052	BRACKET-MODIFIED WEDGE MOUNT (FACTORY INSTALLED)				
	405244	PACK-EZ3 WEDGE MOU	NT (FIELD INSTALLED)			

#### KEY 2 - OPTIONAL RAM MOUNTING BRACKET OPTIONS EZ2600 & EZ4600EID

	A	Fits 1/2 -1-1/2 O.D. Pipe
KEY	PART NUMBER	DESCRIPTION
A	404799	PACK-RAM 1.5 DIA KIT FOR EZ3 INIDICATOR WITH MOUNTING HARDWARE
В	407434	KIT-1.5 DIAMETER RAM MOUNT FOR EZIII INCLUDES 1.5" RAM MOUNT ASSEMBLE, TRIPLE SUCTION CUP BASE, METAL EZIII RAM MOUNTING BRACKET AND HARDWARE
С	406981	MOUNT – 1.5 RAM WITH U-BOLT

1

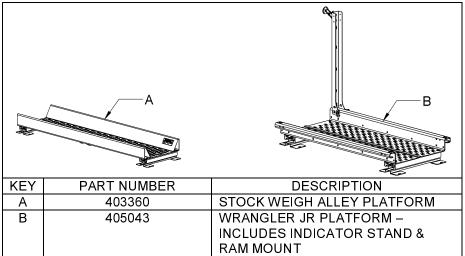
г



#### KEY 3 - POWER SUPPLY OPTIONS – BOTH SUPPLIED W/ ALL INDICATORS

A	B	C1 C2 UK EUR AUST
KEY PART NUMBER		DESCRIPTION
A	404777	BATTERY CLIP ADAPTER, 9' LONG
B 148156		WALL OUTLET, 12VDC OUTLET, 5'6" LONG
C1	406507	AC/DC CONVERTER "SW300 ONLY"
C2	406508	AC PLUG "SW300 ONLY"

#### **KEY 4 - PLATFORM OPTIONS**



Digi-Star

### **KEY 5 - LOAD CELL OPTIONS**

		A B B C C C C C C C C C C C C C C C C C
KEY	PART NUMBER	DESCRIPTION
A	405536	PACK 10K MOUNT FOR QTY 1 MNT (W/O LOAD CELL)
В	405537	PACK 14K MOUNT FOR QTY 1 MNT (W/O LOAD CELL)
KEY	PART NUMBER	DESCRIPTION
A	148042 406700 146769 405105 400144 407015	MODEL SW3300 16" 16" W/ CABLE GUARD 24" 24" W/ CABLE GUARD 33.5" 33.5" W/ CABLE GUARD
В		MODEL SW6600
	400058 407025 400006 407022	33.5" 33.5" W/ CABLE GUARD 44" 44" W/ CABLE GUARD
C	407025 400006	33.5" 33.5" W/ CABLE GUARD 44"

Accuracy:

Increment



# STOCKWEIGH SPECIFICATIONS

#### Gross Capacity

±1% and ±1Display

Model 3300:	3300 lbs. Max
Model 6600:	6600 lbs. Max
Model 7000:	7,000 lbs. Max
Model 10000	10,000 lbs. Max
Model 14000	14,000 lbs. Max

Load Cell Cable Length: 14 Feet

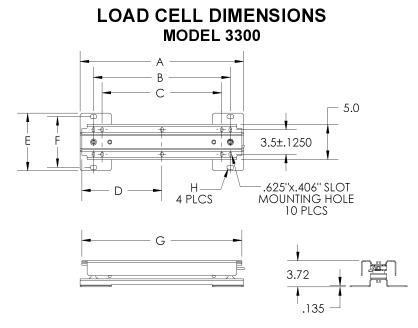
#### **Resolution (For Both Models)**

Increment	<u>Range</u>
1 lbs or kgs	0-300 lbs or kgs
2 lbs or kgs	300-600 lbs or kgs
5 lbs or kgs	600 ⊏> lbs or kgs

**Power Requirements**: 12-14 VDC @ approx 1 Amp (SW300-2-AA Batteries)

AC to DC Converter

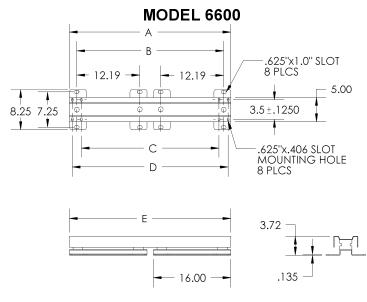
110 VAC to 13.8VDC @ 1.2 Amps



SW3300	А	В	С	D	Е	F	G	Н
406700/ 148042 16"	16"	12.19"	N/A	7.75"	8.25"	7.25"	15.5"	.625" X 1.0" SLOT
405105/ 146769 24"	23.5"	19.69"	17.19"	11.5"	8.25"	7.25"	23"	.562" X 1.0" SLOT
407015/ 400144 33.5"	32.5"	28.75"	23.5"	N/A	8.25"	7.25"	33.5"	.562" X 1.0" SLOT

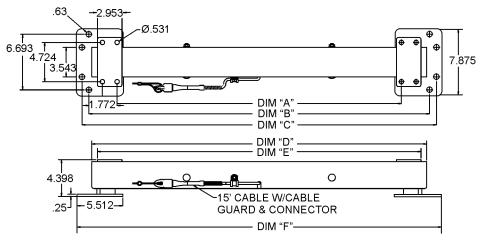
D3746





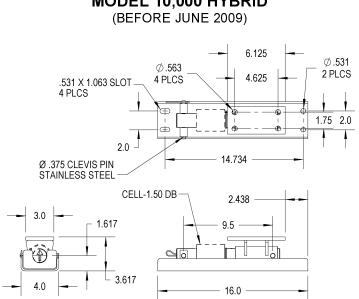
SW6600	А	В	С	D	E
407025/400058 33.5"	33.31"	29.5"	28.75"	32.5"	33.5"
407022/400006 44"	43.81"	40.0"	N/A	43.0"	44.0"

**MODEL 7000** 



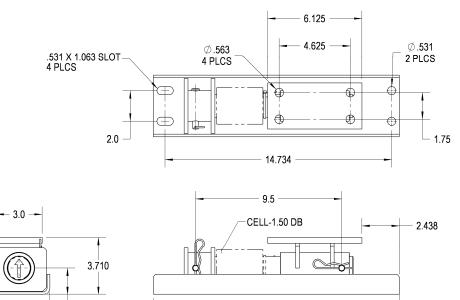
SW7000	А	В	С	D	E	F
407556-34"	28.4	32.8	34.45	33.37	33.12	35.63
406743-39"	34.25	41.062	42.72	40.6	38.98	43.9





MODEL 10,000 HYBRID

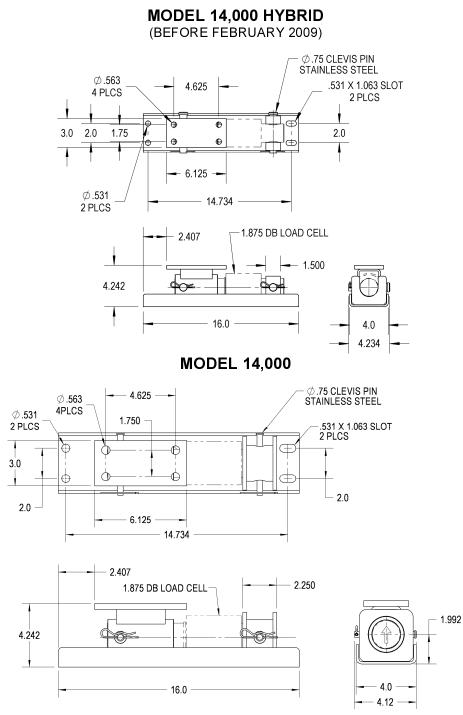
**MODEL 10,000** 



16.0

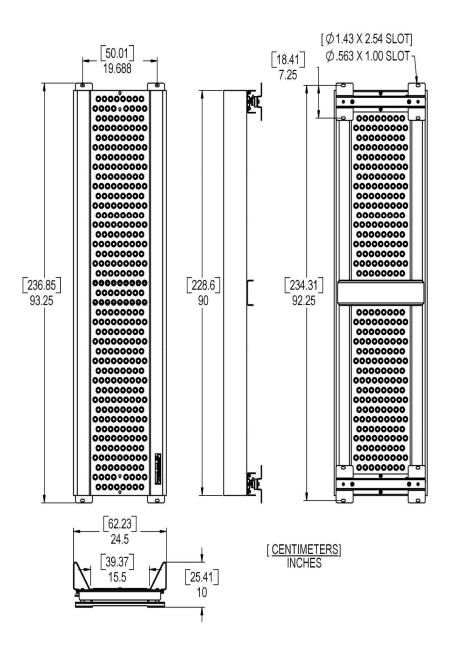
4.0

1.710





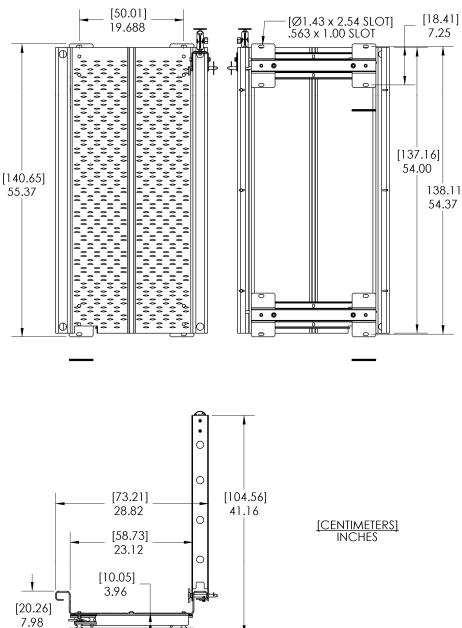
### Installation & Operation SW PLATFORM – WRANGLER – 90"



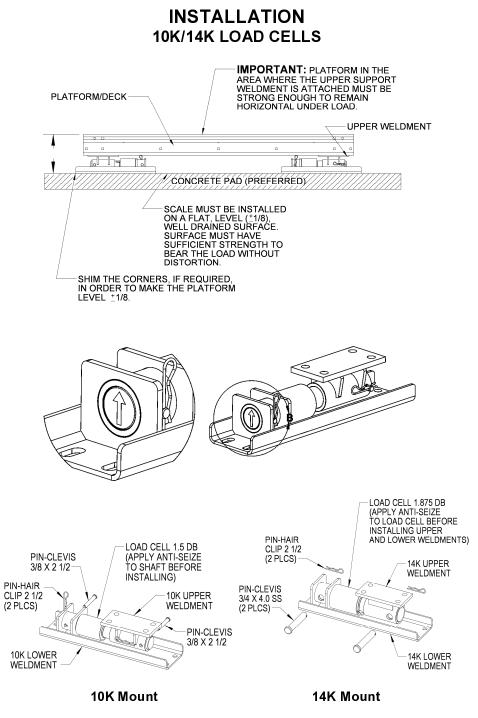


SW Scale & Hardware

SW PLATFORM - WRANGLER JR. - 54"



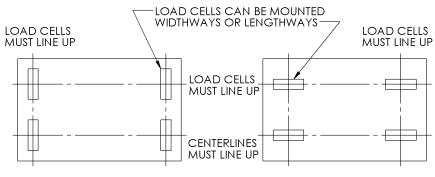
Digi-Star





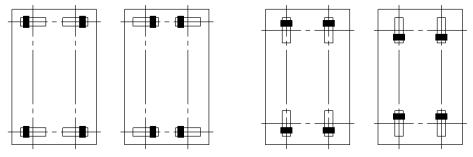
Install all load cells either widthways across the chute or lengthways parallel to the chute.

Align load cells so centerlines are lined up (or within  $\frac{1}{2}$ " (12mm) of each other)



FOUR LOAD CELLS INSTALLED UNDER THE CHUTE/CRUSH

All load cells must be installed in the same direction so that weight is distributed evenly.

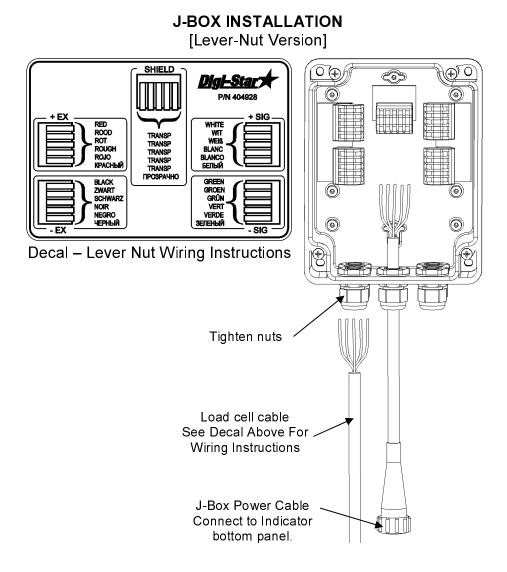


RECOMMENDED INSTALLATION CONFIGURATION

Each corner of the chute must be level for accurate weighing. This ensures that the load distributed equally.

**IMPORTANT:** Do Not weld to load cells with load cell cables connected to the indicator. If you must weld with load cells connected, locate welder ground so that current will not flow through the load cell.





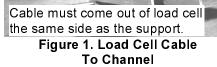
**IMPORTANT:** Do Not weld to load cells with load cell cables connected to the indicator. If you must weld with load cells connected, locate welder ground so that current will not flow through the load cell.

Digi-Star

SW Scale & Hardware

#### WRANGLER JR DECK ASSEMBLY

Push up through slot in plate at bottom of channel



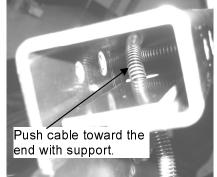


Figure 2. Cable Through Channel

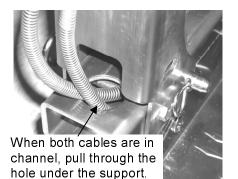


Figure 3. Cable Up From Channel To Support

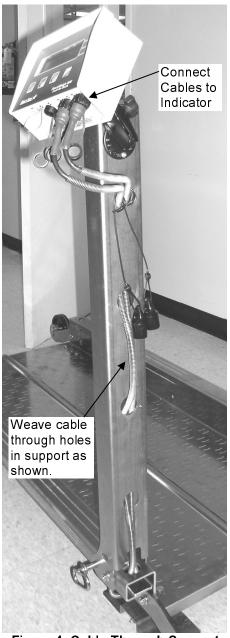


Figure 4. Cable Through Support To Indicator

Digi-Stary

Assemble load cells to deck as shown on page 25. Make sure both load cell cables come out the same side as the indicator support and the cable plate (located under one of the side channels).

Assemble indicator support, 1" ram mount and handle/wheels option as shown on page 25. The ram mount should be mounted on the channel support side which has the cable plate.

Load cell cable routing: Loosen cable retainer plate and push the plate outward. Begin by taking the two cable load cell connectors and feed them through the 1.5" diameter hole from the bottom toward the indicator support, Figure 3. Weave the load cell cable through the support arm toward the indicator, Figure 4. Attach the load cell connector to the indicator and pull any excess cable back down toward the deck.

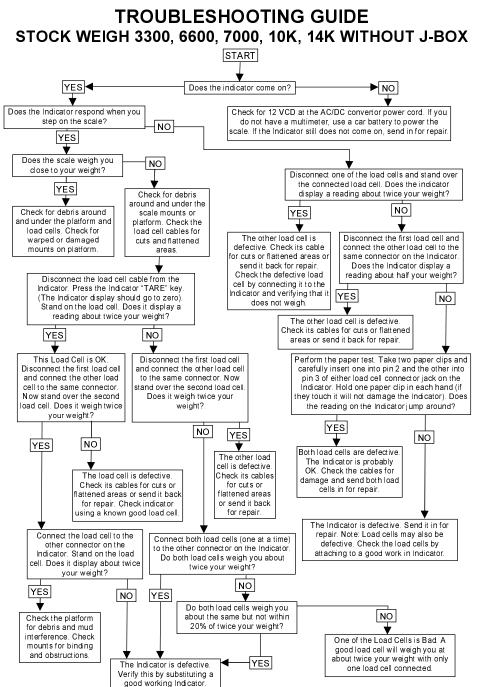
At each load cell, push the cable through the retaining plate slot, Figure 1 and Figure 2. All extra cable is tucked inside the deck channel. When complete, push the cable retaining plate toward the deck to close off the channel. Tighten the three  $\frac{1}{4}$ " bolts to hold the retaining plate in position.

### MAINTENANCE

There are no moving parts and no lubrication required. The only maintenance required is periodic cleaning of the mounts and the area below the scale to assure free and unencumbered operation of the scale. If a pressure washer is being used, do not spray or direct high pressure stream at the load cells. Load cell damage may occur.

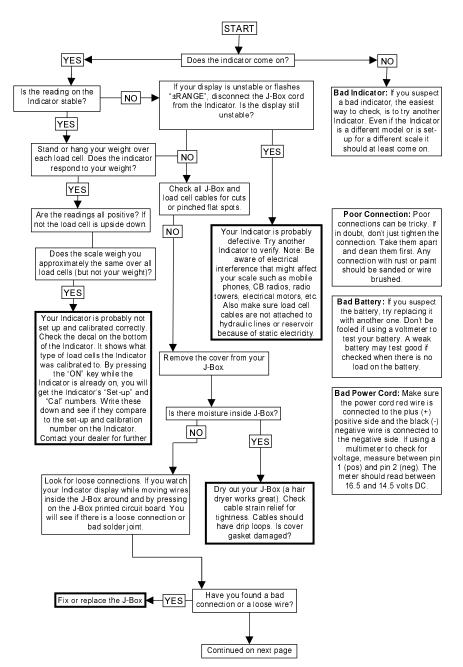
Stand over each of the 4 corners to troubleshoot for problems. Corners should weigh the same within  $\pm$  1% maximum error.





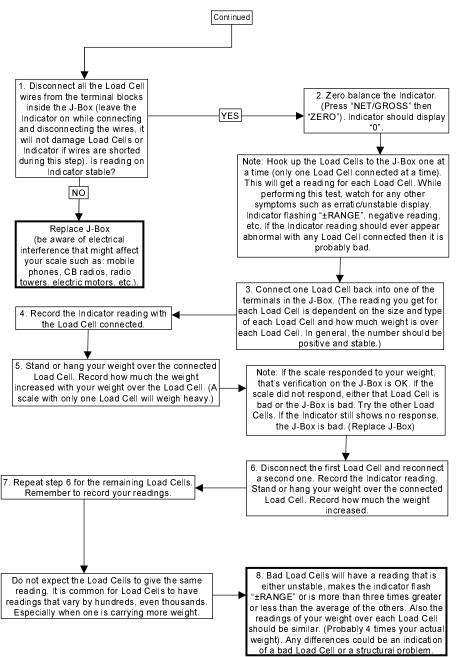


#### STOCK WEIGH 10K/14K WITH J-BOX





STOCK WEIGH 10K/14K WITH J-BOX





### **TYPICAL WOOD PLATFORM CONSTRUCTION**

The following two platforms can be built using readily available building materials. Alternate decking material (plywood or steel grating) may be used if properly supported. An example of proper support could consist of either concrete or timber piers, or a concrete slab. Treated lumber is recommended for decking material.

If alternate deck sizes and/or materials are used, be aware that too much deck deflection will affect weighing accuracy. A heavy strong structure is better than a light one that flexes.

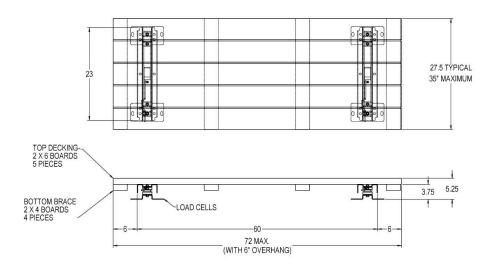
#### Important:

Do not weld to load cells with load cell cables connected to the indicator. If you must weld with load cells connected, locate welder ground so that current will not flow through the load cell.

### MODEL 3300 (3300 LB GROSS CAPACITY)

This is a typical platform that may be used with the Stockweigh Model 3300.

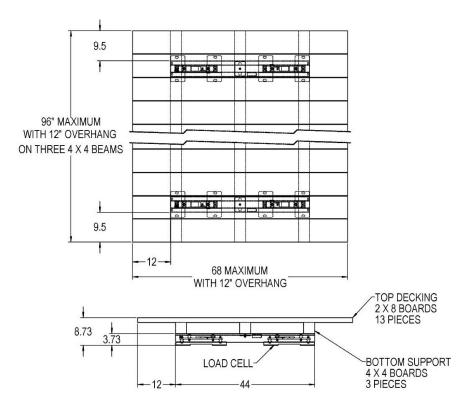
Do not allow deck to overhang more than 6 inches past the edge of the load cell.





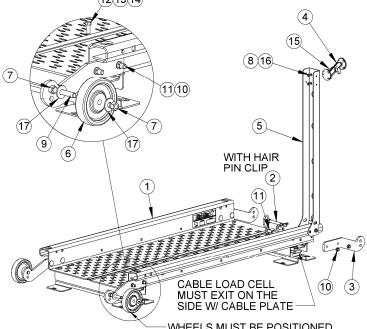
#### SW Scale & Hardware

**MODEL 6600 & 7000 (6600 & 7000 LBS GROSS CAPACITY)** This plan is an example of a platform that may be used with the Stockweigh Model 6600 & 7000. Do not allow deck to overhang more than 12 inches past the edge of the load cell.





# REPAIR PARTS PLATFORM ASSEMBLY, WRANLGER JR P/N 405043

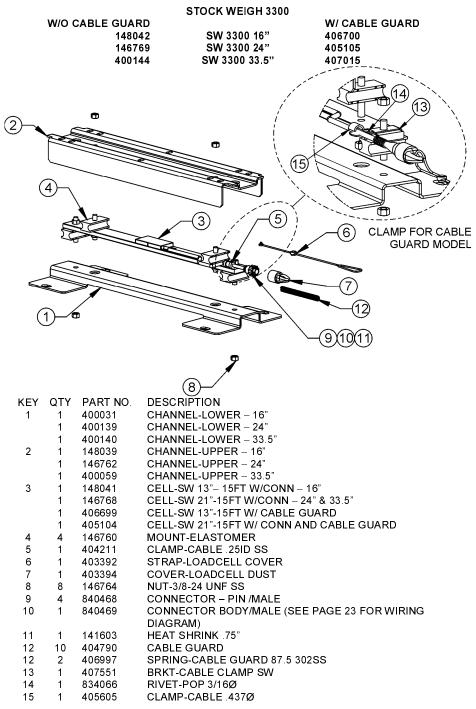


WHEELS MUST BE POSITIONED TO OUTSIDE OF MOUNTING PLATE

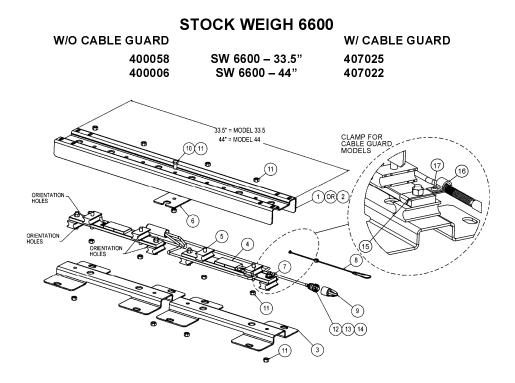
KEY	QTY	PART NO	DESCRIPTION
1	1	405121	ASSY-54" DECK WRANGLER JR
2	1	405081	PIN-HITCH 1/2 X 4.0 LEN ZP
3	4	405050	PLATE-SW DECK HANDLES
4	1	403180	ASSY-1" RAM MOUNT
5	1	405070	BRKT-INDICATOR SUPPT
6	2	405051	WHEEL-5.0 OD X 5 ID
7	4	404974	NUT-1/2-13 NC LOCK SS
8	2	405061	WASH-#10 FLAT ZP
9	2	405238	SCR -1/2-13 X 3.0 HHCS ZP GRD 5
10	9	404705	NUT-3/8-16 SER FLANGE ZP
11	8	405060	SCR- 3/8-16 X 1.0, CRG BOLT ZP GR2
12	8	400037	SCR-3/8-16 X 1.0 HHCS ZP GRD5
13	8	171610	WASH-3/8 TYPE A NARROW FLAT
14	8	404292	NUT - 3/8-16 NYLOC ZP
15	2	840494	SCR-RHMS #10-24 X 5/8 ZP
16	2	400401	NUT-#10-24 LOCK
17	4	405053	WASH-1/2 FLAT ZP
18	1	405080	SCR - 3/8-16 X 3 5 HHCS GRD 5 ZP

Digi-Star

#### SW Scale & Hardware



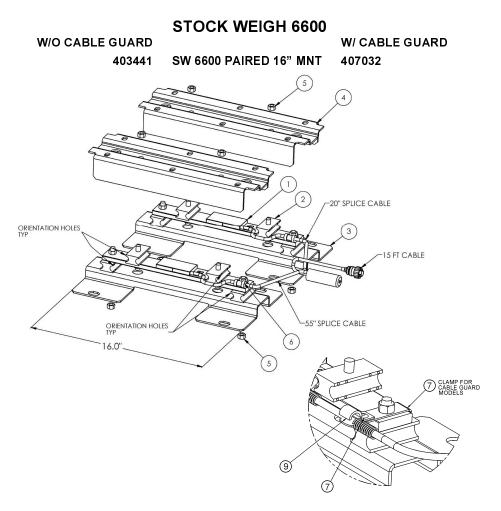




KEY	QTY	PART NO	DESCRIPTION
1	1	400059	CHANNEL-33.5" SW 6600 UPPER
2	1	400010	CHANNEL-44" SW 6600 UPPER
3	2	400031	CHANNEL-16" SW 3300 LOWER
4	1	400005	CELL-SW 13"-15 FT CORD W/ CONNECTOR
	1	407019	CELL-SW 13"-15 FT W/ CABLE GUARD
5	8	146760	MOUNT-ELASTOMER
6	1	404212	CABLE-LOOP RETAINER
7	1	404211	CLAMP-CABLE 25 ID SS
8	1	403392	STRAP-LOAD CELL COVER
9	1	403394	COVER-LOADCELL DUST
10	1	400303	HEX HEAD CAP SCREW 3/8-24 X 3/4 SS
11	17	146764	NUT-3/8-24 UNF SS
12	4	840468	CONNECTOR – PIN /MALE
13	1	840469	CONNECTOR BODY/MALE (SEE PAGE 23 FOR WIRING DIAGRAM)
14	1	141603	HEAT SHRINK .75"
15	1	407551	BRKT-CABLE CLAMP SW
16	1	405605	CLAMP-CABLE 437Ø
17	1	834066	RIVET-POP 3/16

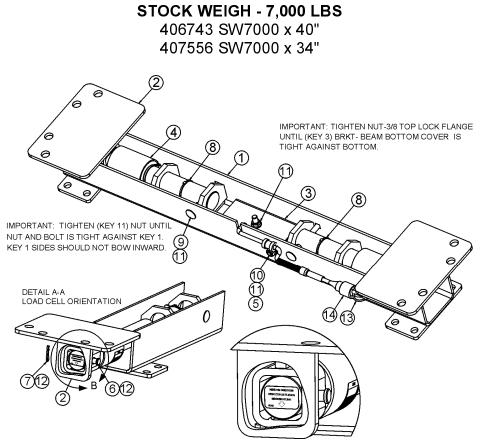
Digi-Star

### SW Scale & Hardware



KEY	QTY	PART NO	DESCRIPTION
1	1	403440	CELL-SW PR 13"-15FT W/ CONNECTOR (ORDER 407039)
	1	407039	CELL-SW PR 13"-15FT W/ CABLE GUARD
2	8	146760	MOUNT ELASTOMER
3	2	400031	CHANNEL-16" SW 3300 LOWER
4	2	148039	CHANNEL-16" SW 3300 UPPER
5	16	146764	NUT-3/8-24 UNF SS
6	2	404211	CLAMP-CABLE .25 ID SS
7	1	407551	BRKT-CABLE CLAMP SW
8	1	834066	RIVET-POP 3/16"
9	1	405605	CLAMP-CABLE437Ø



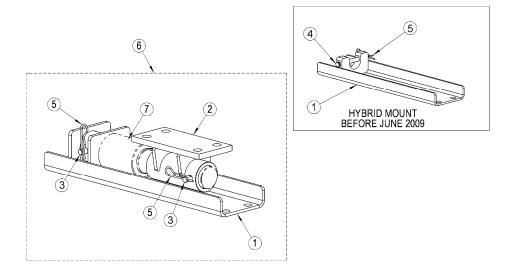


DETAIL B

KEY	QTY	PART NO	DESCRIPTION
1	1	407554	WELD-BEAM 7K X 33.4
	1	407175	WELD-BEAM 7K X 40.4
2	2	407179	WELD-7K BASE SUPPT
3	1	407559	BRKT-CABLE COVER 33" MODEL
	1	407177	BRKT-CABLE COVER 40" MODEL
4	1	407056	CELL-SW PAIR 1.5 DB GUARD
5	1	407289	CLAMP-CABLE .375 SS
6	2	405861	PIN-CLEVIS 3/8 X 2.5 ZP
7	2	407293	PIN-HAIR CLIP .080 X 1.188 ZP
8	2	PS2144	CABLE TIE- 14 X 11.625" BLACK
9	2	407095	SCR-3/8-16 X 4.0 CRG ZP GR5
10	1	407187	SCR-3/8-16 X .75 CRG ZP GR5
11	4	407296	NUT-3/8-16 TOP LOCK FLANGE ZP
12	4	171610	WASH-3/8 FLAT NARROW ZP
13	1	403392	STRAP, LOADCELL COVER
14	1	403394	COVER, LOADCELL DUST



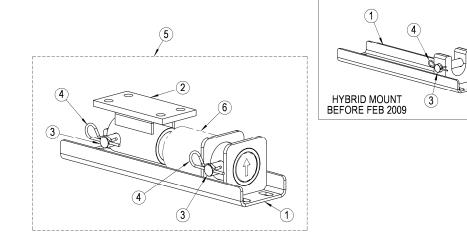
### STOCK WEIGH - 10,000 LBS



KEY	QTY	PART NO	DESCRIPTION
1	1	404875	WELD-10K LOWER MTG SUPPT
	1	404964	WELD-10K LOWER MTG SUPPT HYBRID
			(OBSOLETE ORDER 404875)
2	1	404874	WELD-UPPER MTG 1.5 ID
3	1	403664	PIN - 3/8 X 2-1/2 CLEVIS SS
4	1	404976	PIN-CLEVIS 3/8 X 4.0 SS
5	2	405094	PIN-HAIR CLIP 3/32 X 2-1/2
6	1	405536	PACK – 10K MOUNT
7	1	403138	CELL – SW PAIR 1.5DB (ORDER 407056)
	1	407056	CELL – SW PAIR 1.5DB W/ CABLE GUARD
	1	400400	CELL – 1.5DB 10K (REF, ORDER
			SEPARATE)
	1	407055	CELL – 1.5DB 10K W/ CABLE GUARD

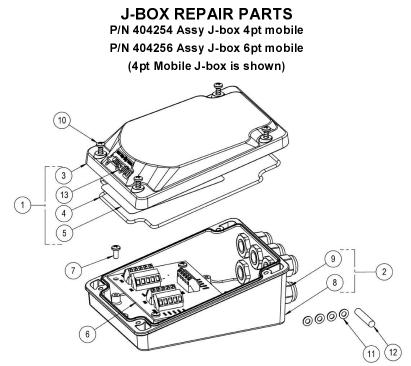
<u>Digi-Star</u>y

# STOCK WEIGH - 14,000 LBS



QTY	PART NO	DESCRIPTION
1	405089	WELD-14K LOWER CHANNEL
1	405135	WELD-14K LOWER CHANNEL HYBRID
		(OBSOLETE ORDER 405089)
1	405088	WELD-14K UPPER MNT
2	405137	PIN-CLEVIS 3/4 X 4.0 SS
2	405094	PIN-HAIR CLIP 3/32 X 2-1/2
1	405537	PACK – 14K MOUNT
1	403857	CELL – SW PAIR 1.875DB 14K (ORDER
		407057)
1	407057	CELL – SW PAIR 1.875 DB W/ CABLE
		GUARD
1	153171	CELL – 1.875DB 14K (REF, ORDER
		SEPARATE)
1	407058	CELL – 1.875 DB 14K W/ CABLE GUARD
	1 1 2 2 1 1 1	1 405089   1 405135   1 405088   2 405137   2 405094   1 405537   1 403857   1 407057   1 153171

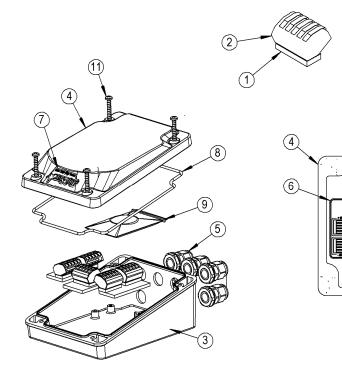
<u>Digi-Star</u>7



KEY	PART NO.	DESCRIPTION
1	404257	TOP COVER ASSEMBLY (INCLUDES KEYS 3-5, 13)
2	404258	BOTTOM HOUSING ASSEMBLY – 3PT/4PT MOBILE (INCLUDES KEYS 8, 9)
	404261	BOTTOM HOUSING ASSEMBLY – 6 PT MOBILE (INCLUDES KEYS 8, 9)
3	404084	HOUSING TOP COVER
4	404082	GASKET J-BOX .106 DIA
5	404283	DECAL-J-BOX WIRING
6	148051	PC BOARD ASSEMBLY-COMPLETE 3PT/4PT
	404275	PC BOARD ASSEMBLY-COMPLETE 6PT
7	404616	SCR-#8 X 3/8 PH HI/LOW ZP
8	404083	BOTTOM HOUSING 3PT/4PT
	404158	BOTTOM HOUSING 6PT W/DRILLED HOLES
9	141885	STRAIN RELIEF HEYCO
10	404160	SCR-#8 X 1.0 PHSTS SS
11	404217	WASHER-#8 SMALL OD FLAT SS
12	146724	ROD-1/4" PLASTIC HEYCO PLUG
13	404486	DECAL DIGI-STAR (.8" X 1.9")



#### J-BOX REPAIR PARTS P/N 404930 Assy Lever Nut J-box

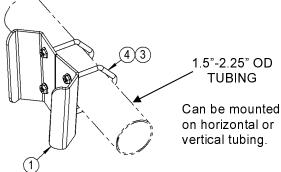


KEY	QTY	PART NO	DESCRIPTION
1	8"	148185	FASTENER- HOOK & LOOP
2	5	404927	TERMINAL-LEVER-LOCK 5 POS
3	1	404083	HSG-J BOX BOTTOM
4	1	404084	HSG-J B0X TOP
5	5	141885	RELIEF - STRAIN HEYCO
6	1	404928	DECAL LEVER-NUT WIRING INSTR
7	1	404486	DECAL-DIGI-STAR BLUE
8	1	404082	GASKET-J-BOX HSG .106 DIA
9	1	404347	PACK J-BOX MTG HWD
10	1	D3730	MANUAL-LEVER-NUT J-BOX INSTALL
11	4	404160	SCR-#8 X 1.0 PHSTS 48-2 SS

**Digi-Star** 

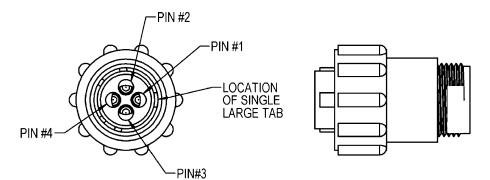
SW Scale & Hardware

# WEDGE MOUNT P/N 405124 Wedge Mount Socket



KEY	QTY	PART NO	DESCRIPTION
1	1	405072	BRKT-WEDGE MTG SOCKET
3	2	405069	BOLT-U 1/4-20 X 3.25 ZP
4	4	405084	NUT-1/4-20 TOP LOCK FLANGE ZP

# WIRING DIAGRAM - LOAD CELL CONNECTOR



PIN	WIRE COLOR	DESCRIPTION
1	RED	+EX
2	GREEN	-SIG
3	WHITE	+SIG
4	BLACK	-EX
	DRAIN	