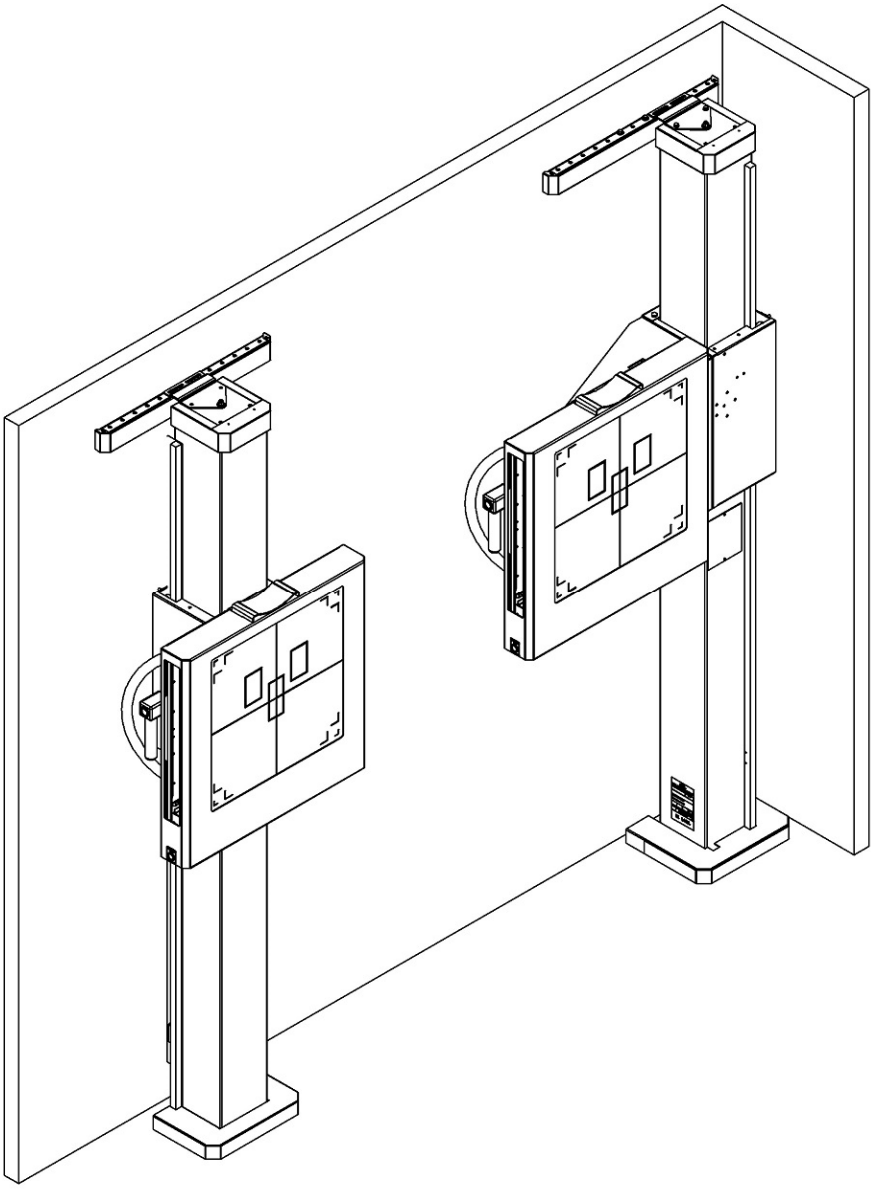
HEAVY-DUTY WALLSTAND

MODEL J1000



INSTALLATION, SERVICE, AND OPERATION MANUAL

02409-000 Rev. M

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REVISION HISTORY

REVISION	ECR	Description	Release Date
A	4750	Initial Release	September 2005
B	7020	Pg.17, p/n of Front Panel was 02330	January 2011
C	6925	Added Specification Table; UL compliance changes	April 2011
D	7640	Add Warning to Section 2.6 and 3.4	August 2012
E	7778	Update graphic for Figure 1.1 to remove side mount Patient Grip Handles	December 2012
F	8038	Updated installation instructions to reflect change to new wall mount system. Eliminated assembly steps now performed at factory. Updated Table of Contents.	February 2014
G	8608	Section 4 became Section 5, added new Section 4 Basic Maintenance, updated TOC	February 2015
H	9279	Removed Section 1.2; Replaced items in Section 1.1 with Symbol Table	November 2016
J	9594	Added Intended Use, Attenuation, and Cleaning information to page 5.	June, 2017
K	10306	Removed 5.0 Part Number Guide; Updated TOC	September, 2019
L	10337	Updated to new-style J1000: cabinet frame, chamfered covers; added remote collimator light switch instructions; Added OPERATION section and updated title	October, 2019
M	10661	Added Section 3.3 Nova OTS with Ralco Collimator; Updated Table of Contents	December, 2020

TABLE OF CONTENTS

1.0 DEFINITIONS AND SPECIFICATIONS 1
1.1 Definition of Symbols Used on the Equipment 1
1.2 General Precautions and Notices 2
1.3 Specifications 3
1.4 Layout Information 3
2.0 INSTALLATION 5
2.1 Positioning and Mounting the Column 5
2.2 Power 7
2.3 Trim Weights 7
3.0 CONNECTING THE REMOTE COLLIMATOR LIGHT SWITCH 8
3.1 Ralco Collimator 8
3.2 Collimare Collimator (07877) 9
3.3 Nova OTS with Ralco Collimator 10
4.0 REVERSING LOAD ORIENTATION (IF REQUIRED) 11
4.1 Reversing load orientation of the lock release handle 11
4.2 Reversing the Bucky Pan (Side Mounted Systems) 11
5.0 BASIC MAINTENANCE 11
6.0 OPERATION 13

1.0 DEFINITIONS AND SPECIFICATIONS

1.1 Definition of Symbols Used on the Equipment

Symbol Legends	
Symbol	**Definition**
	Date of manufacture
	Manufacturer
	Serial Number
	Reference Number (Model/Part Number)
	Keep Dry
	NOTE This symbol represents Information that assists the user of the manual in the performance of a task. It may provide the user with better methods of conducting the task, or it may point out conditions that could cause the system to fail to operate properly.
 CAUTION	Points out special procedures, or precautions, that personnel must follow to avoid equipment damage.
 WARNING	Identifies situations or actions that may affect patient or user safety. Disregarding a warning could result in patient or user injury.
	TYPE B APPLIED PART This symbol indicates equipment providing a particular degree of protection against electric shock, particularly regarding allowable leakage currents and reliability of the protective earth connection (if present).
	This symbol indicates an Electro Sensitive Device is present which must be carefully handled to prevent damage to the device.
	ELECTRIC SHOCK HAZARD WARNING This symbol indicates an electric shock hazard.
	DANGER VOLTAGE This symbol indicates hazards arising from dangerous voltages.
	DIRECT CURRENT This symbol indicates a direct current source.
	PROTECTIVE EARTH TERMINATIONS This symbol indicates protective earth terminations in device.

1.2 General Precautions and Notices

WARNING

All of the components used with the Wallstand (generator, bucky, etc.) shall comply with UL 60601 standards.

Intended Use

This is an x-ray wallstand, a mechanical device intended to hold and position an X-ray image receptor during a radiographic procedures.

Attenuation

All included components between the patient and image receptor have been certified to comply with 21 CFR Chapter 1 Subchapter J (§1020.30). For any such components added to the system it is the responsibility of the installer to ensure compliance.

Cleaning

The manufacturer recommends disinfection of the equipment between uses for any surfaces that may come in contact with the patient during a radiographic procedure.

1.3 Specifications

SPECIFICATION SUMMARY TABLE	
Electrical Ratings	24VDC, 1A ⎓ (or equivalent)
Maximum Image Receptor Load	40 lbs (18.1 kg)
Environmental Conditions	Temperature range for: Transport and Storage: -40° F to +158° F / -40° C to +70° C Use: +50° F to +104° F / +10° C to +40° C Relative Humidity Limits for: Transport and Storage: 10% to 100% Use: 30% to 75% Atmospheric pressure range for: Transport and Storage: 14.67 inHg to 31.30 inHg / 500 hPa to 1060 hPa Use: 20.67 inHg to 31.30 inHg / 700 hPa to 1060 hPa
Information regarding potential EMC interference and advice for avoidance	• Mains power quality should be that of a typical commercial or hospital environment • Power frequency magnetic fields should be at levels characteristic of a typical location in a commercial or hospital environment
Degree of protection against harmful ingress of water	IPXO/Ordinary
Degree of protection against electric shock	Class I, Type B Applied Parts 
Applicable Standards	This X-ray Wallstand complies with the following regulatory and design standards: • UL 60601-1 • CAN/CSA C22.2 No. 601.1, CAN/CSA C22.2 No. 601.2.32-98 • X-RAY EQUIPMENT IEC60601-2-32:1994
Safety Label	
Note: The UL Classification does not include X-Ray Generator or Image Receptor.	
Equipment not suitable for use with flammable anesthetic mixture with air or with oxygen or nitrous oxide.	

1.4 Layout Information

The J1000 is configured at the factory for a side or front mounted image receptor, load left or load right available for each. See Figure 1a below.

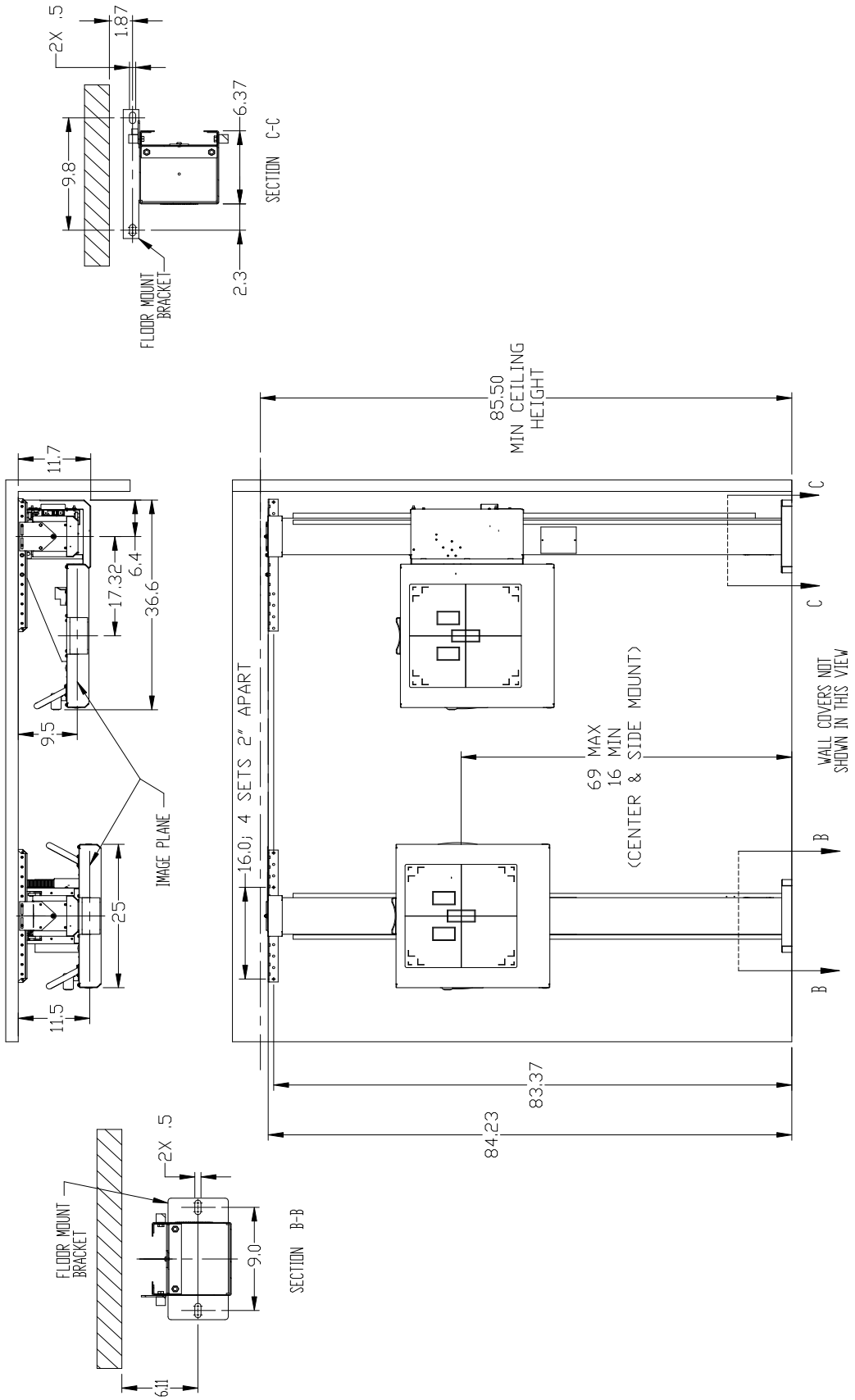


Figure 1a: Layout Dimensions

2.0 INSTALLATION

The wallstand must be securely mounted to the floor and the wall for safe operation. Two physically capable installers are required to perform the installation procedure.

CAUTION

Keep the counterweight immobilized with the shipping bolts

The wall mount design allows fine adjustment of the wallstand to ensure the receptor center is at the center of an aligned and properly tracking x-ray beam. The column is intended to be mounted near the middle of the wall mounting angle for a symmetrical appearance. However the column can be mounted as far as 8-1/4 inches to either side of center.

2.1 Positioning and Mounting the Column

Determine the approximate radiographic position of the wallstand column.

Position the bracket to the wall with the horizontal top surface 84-1/4 inches above the finished floor, oriented as shown below. This places the mounting bolt holes at 83-3/8 inches above the finished floor. Figure 2a shows the dimensions of the wall mounting angle.

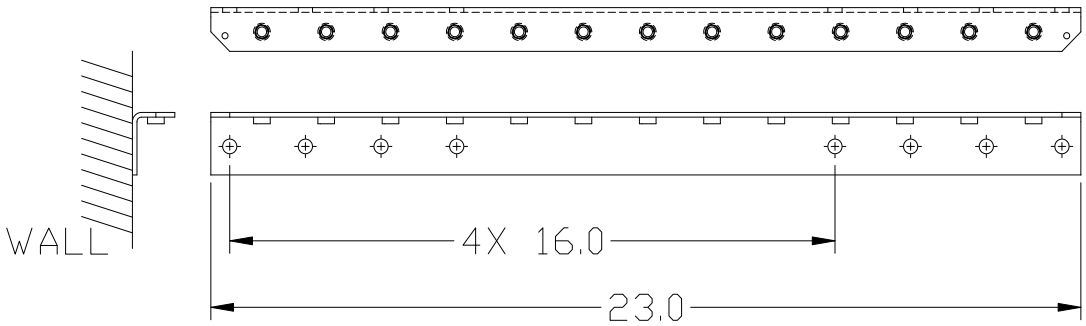


Figure 2a: Front view of wall mounting angle

The four hole pairs are spaced on 16-inch centers. Align the center of the mounting angle with the intended column centerline (based on the beam centerline and receptor configuration), then shift left or right to align one set of these holes with the closest available wall studs. Component geometry allows up to 8-1/4 inches of shift in either direction. Bolt the mounting angle in place using hardware appropriate to the wall and stud material (not provided). The fasteners should have minimum pullout strength of 500 lbs each. For reference, a #10 steel wood screw with 2.5” of thread engagement in construction-grade wood provides 750 lbs minimum pullout strength.

Secure the column connecting plate to the top of the column. Remove the nut and washer from the top threaded stud on the column. Orient the connecting plate with the slots toward the wall and the “point” of the triangle toward the front of the column. The jog in the plate faces up. See Figure 2b below.

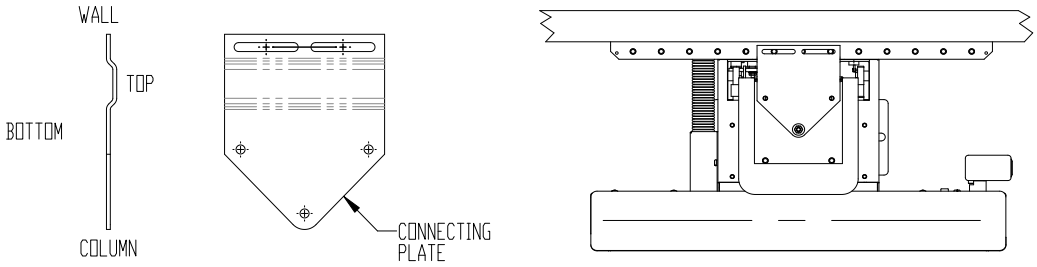
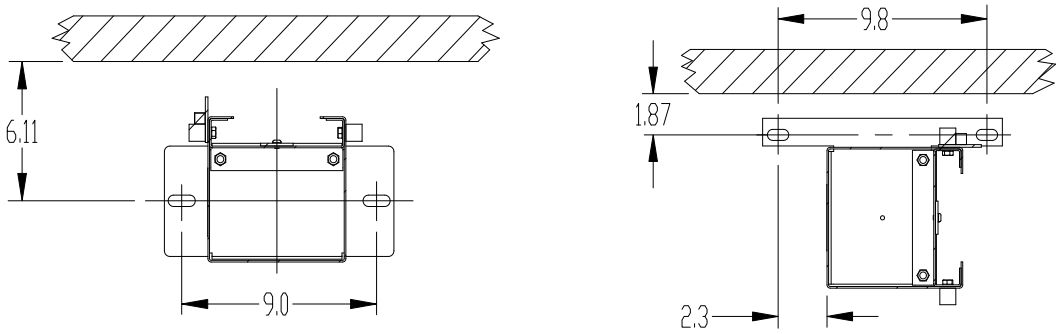


Figure 2b

Place the stud through the hole at the point of the plate. Insert two ¼-20 bolts with lock washers through the remaining holes in the plate (two rear corners of the column top). Replace the washers and hex nut on the center column stud.

Secure the floor mount bracket to the base of the column. Type and orientation of the floor mount bracket will depend on whether the receptor is center mount or side mount.



Front Mount **Side Mount (left shown)**

Figure 2c

Raise the column into position. Secure the connecting plate to the top of the wall mounting angle through the slots using the ¼-20 bolts, flat washers, and lock washers provided. Use at least two bolts and always use the outermost holes. Use three bolts if possible.

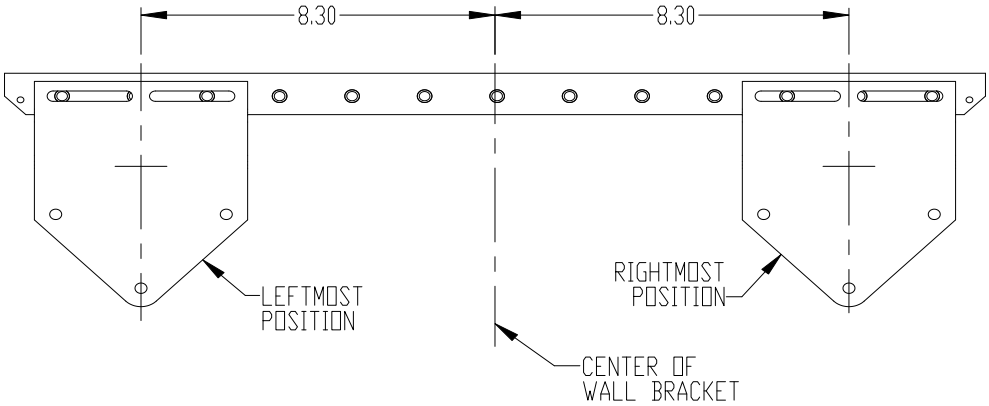


Figure 2d

Ensure the wallstand position places the receptor center at the center of the beam, adjusting if necessary. Secure the base of the column to the floor with appropriate floor anchors (not provided).

Install the wall bracket cover and secure from above with two #10 hex head screws and lock washers provided.

Install the column top cap. This cap has tabs on the back to hold the cap in place.

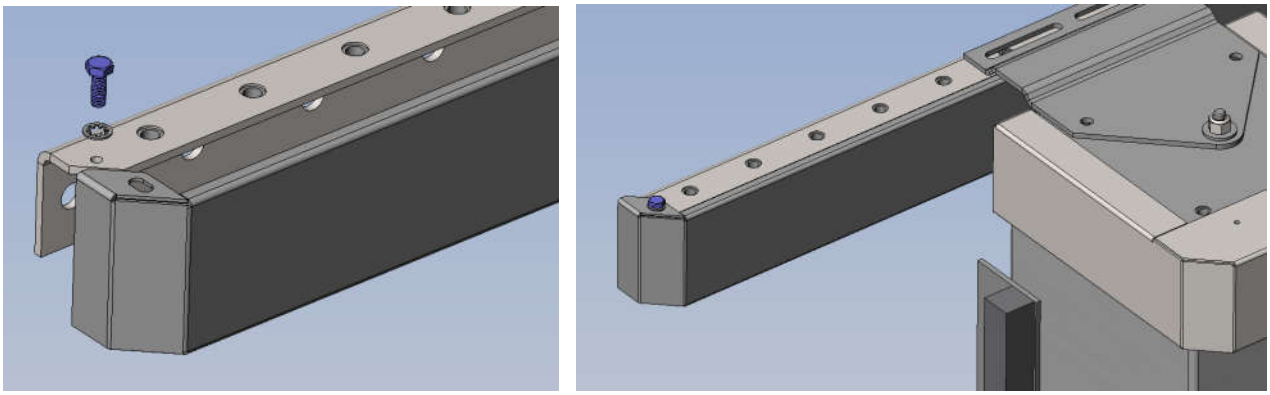


Figure 2e

2.2 Power

Power the column with 24 VDC. This can be done from the generator or from an individual 120VAC input power supply (included with the system).

2.3 Trim Weights

WARNING

The counterweight access holes are dangerous shear points when the covers are off and the counterweight is in the column. Do not use these holes as handles to lift or move the column.

With all optional hardware and the tray in place, remove the two counterweight locking bolts that limit vertical travel (see Figure 2f).

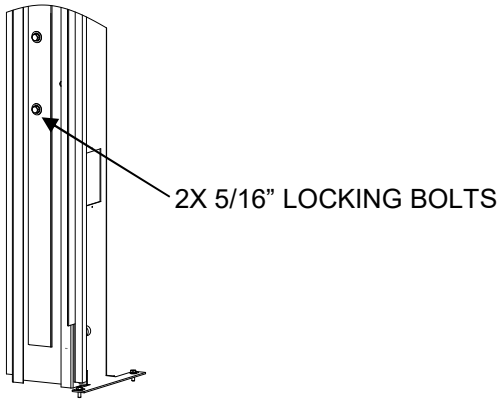
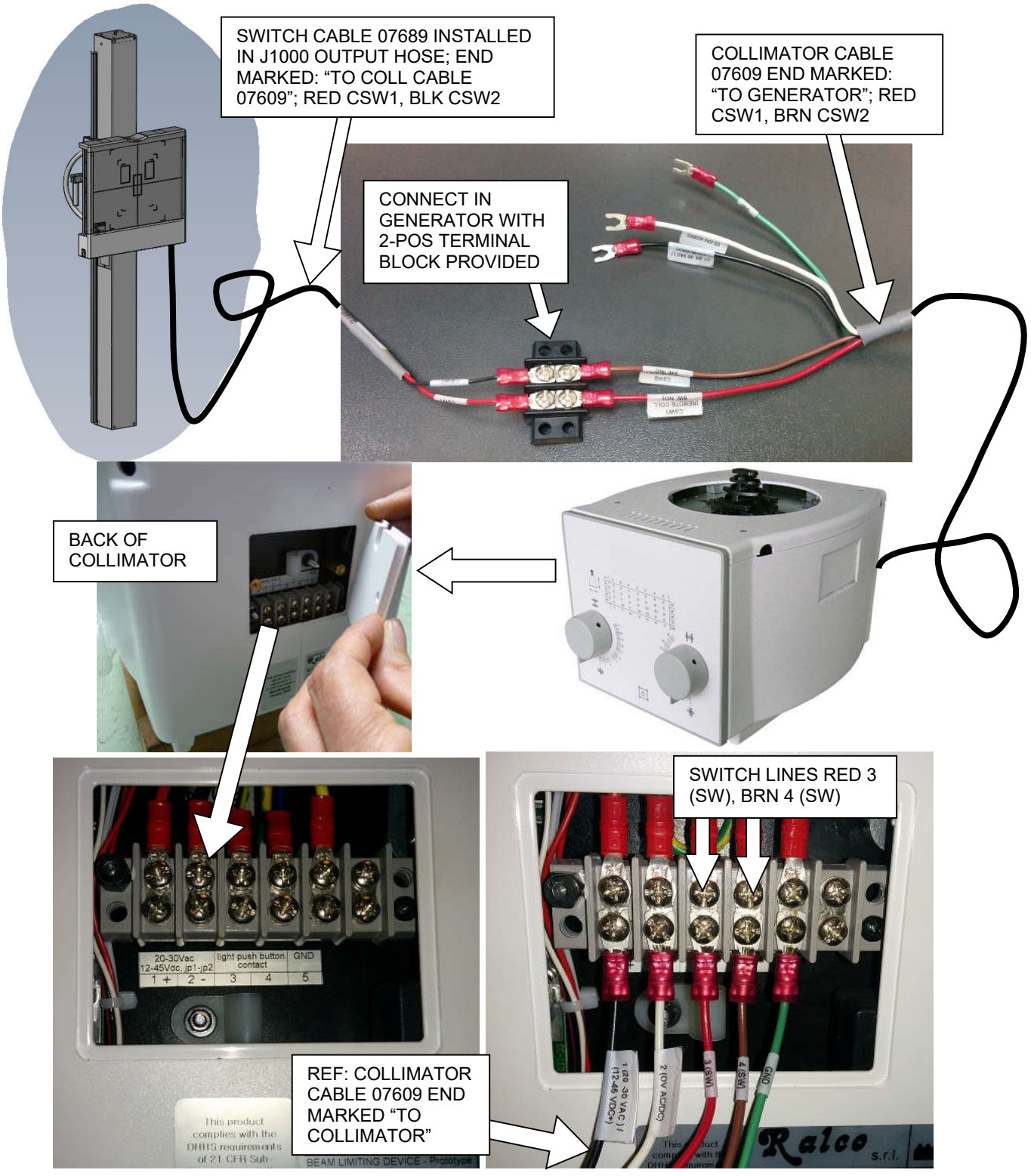


Figure 2f

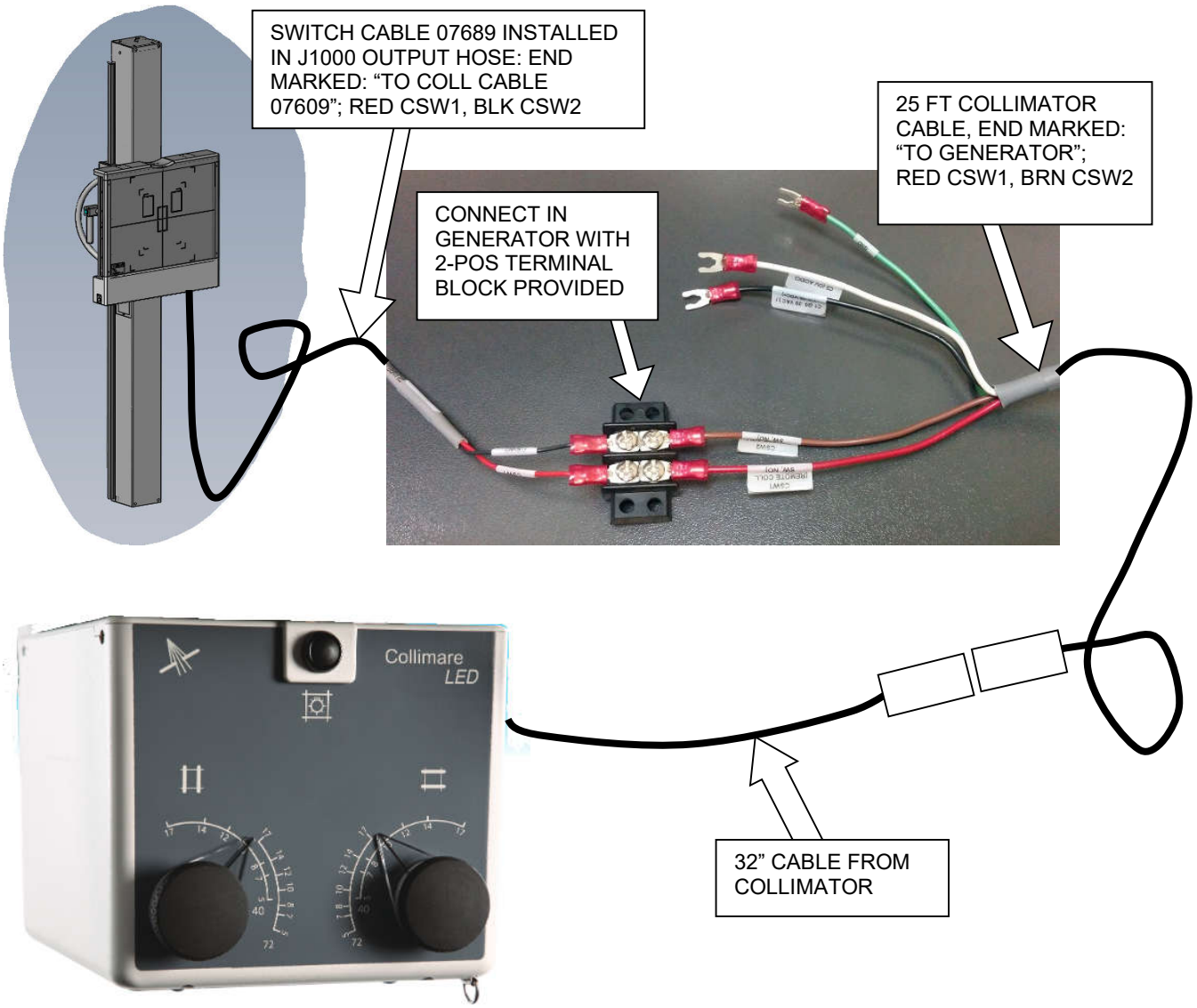
Push and hold the vertical lock switch and move the receptor up and down to check for balance. If trim weight is required, remove the counterweight access cover and install the necessary trim weight(s). Reinstall the counterweight access cover.

3.0 CONNECTING THE REMOTE COLLIMATOR LIGHT SWITCH

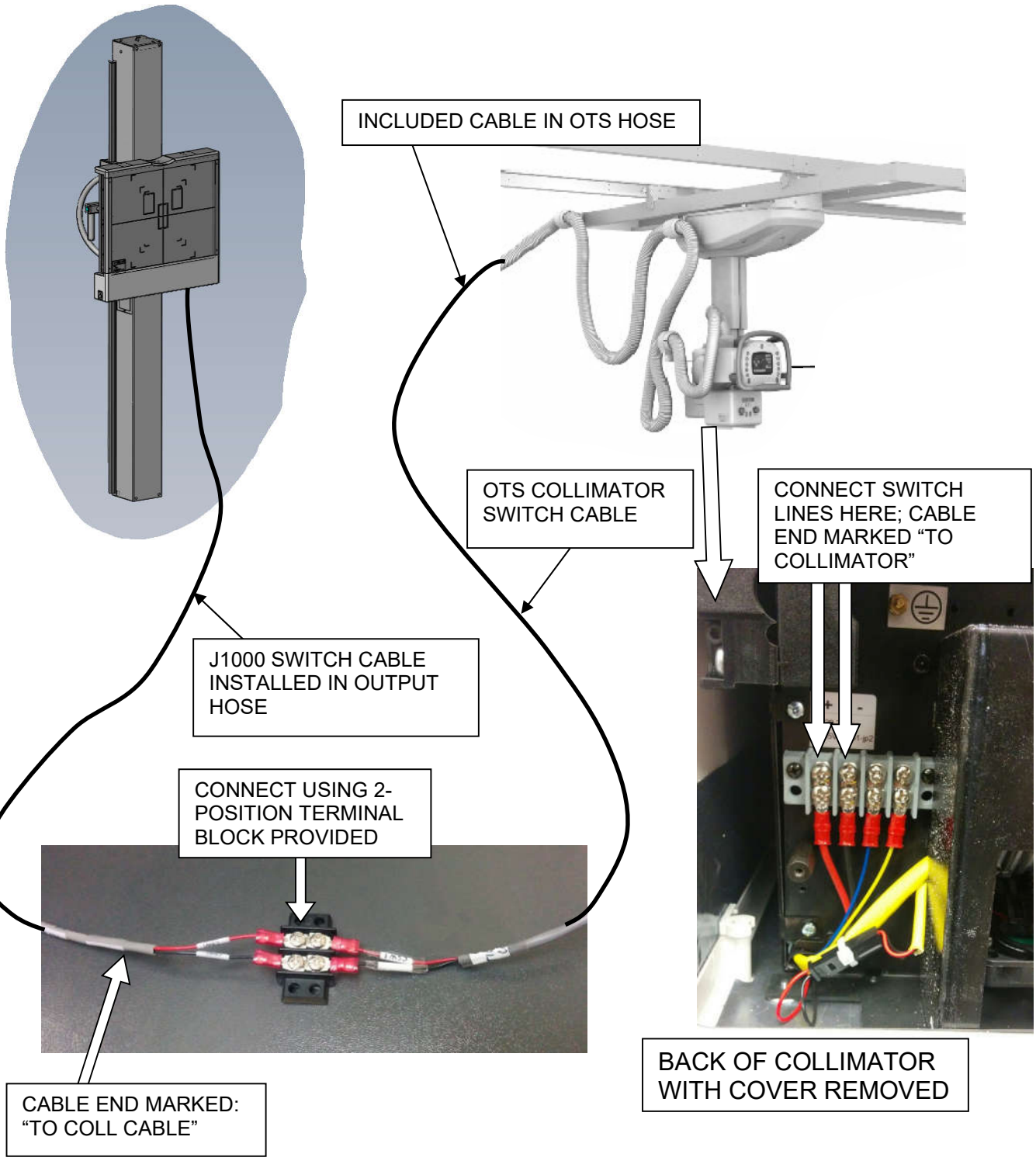
3.1 Ralco Collimator



3.2 Collimare Collimator (07877)



3.3 Nova OTS with Ralco Collimator



4.0 REVERSING LOAD ORIENTATION (if required)

4.1 Reversing load orientation of the lock release handle

Remove the shoulder screw, detaching the swivel mount. Remove the limit screw. Relocate the limit screw on the opposite side of the assembly. Swap the locations of the shoulder screw and swivel mount so each is on the opposite side from where it was previously and reinstall. See Figure 3a.

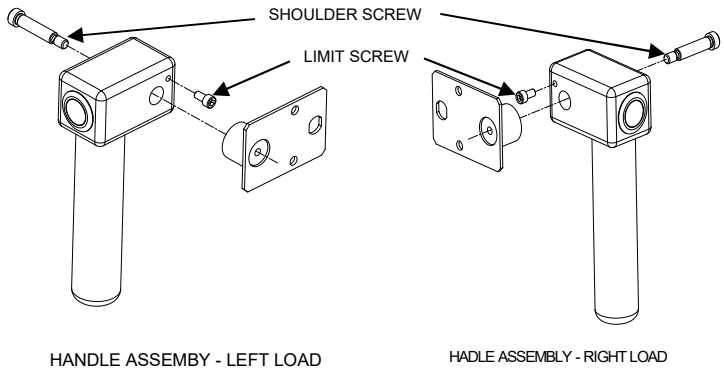


Figure 3a: Lock Handle Components, Reversing Load Orientation

4.2 Reversing the Bucky Pan (Side Mounted Systems)

Remove the frame and receptor cabinet from the column assembly. Detach the lock handle release handle assembly and reverse load orientation. Remove the cabinet mounting pan.

Rotate the column 180 degrees.

Detach the cabinet adapter bracket from the slide and rotate it so that the studs are facing forward again.

Reinstall the cabinet mounting pan, lock release handle, receptor cabinet, and frame.

5.0 BASIC MAINTENANCE

The following maintenance items are required for safety of operation, continued ease of use, and long life of the product.

The maintenance program should be performed only by qualified and authorized service personnel. Frequency of the service should be 30 days after installation and annually thereafter unless indicated otherwise by local codes and regulations.

Maintenance Items:

Clean exterior of the assembly, inspecting for damage and missing hardware.

Verify smooth vertical travel along the entire vertical range; check all bearings for proper operation.

Verify the travel stops are in good functional condition.

Check all fasteners for tightness including the floor and wall mounts.

Verify proper operation of the lock release switch and handle and proper function of the locks.

Inspect all cable connections and cable strain reliefs. All connections should be tight and secure. Inspect exposed cabling for damage.

Inspect counterweight cables for fraying, damage, or wear.

Verify counterweight access covers are secure.

6.0 OPERATION

Vertical Adjustment

The lock release handle is located on the load side of the detector cabinet. Press and hold the button to release the electric lock and adjust the vertical position of the cabinet. Release to lock.

Remote Collimator Light Switch

The remote collimator light switch is located on the same side as the lock release handle. Press the button to light the collimator field from beside the cabinet.

Lateral Handle (if option present)

Pull the lateral handle away from the front panel in order to adjust its tilt angle. Release for it to retract and hold position.

The entire lateral handle assembly is removable from the socket. Grasp the base and pull straight up to remove.