



7900 Ophthalmic Instrument Stand Operation & Installation

EN | FR

Look closer. See further.

 HAAG-STREIT
RELIANCE



SERIAL NUMBER

For your future reference, mark the serial number in the space provided.

Haag-Streit USA Inc.

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MADE IN USA

QUALITY MANAGEMENT
SYSTEM
REGISTERED TO
ISO 13485:2016

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IMPORTANT INFORMATION

SAFETY SYMBOLS

Whenever you see the symbols shown below, heed their instructions! Always follow safe operating and maintenance practices.



“DANGER” – THE DANGER SYMBOL IDENTIFIES SPECIAL INSTRUCTIONS OR PROCEDURES WHICH, IF NOT CORRECTLY FOLLOWED, COULD RESULT IN LOSS OF LIFE OR PERSONAL INJURY.



“DANGER” – LE SYMBOLE DANGER IDENTIFIE DES INSTRUCTIONS OU PROCÉDURES SPÉCIALES QUI, SI ELLES NE SONT PAS SUIVIES CORRECTEMENT, POURRAIENT CAUSER UNE PERTE DE VIE OU UNE BLESSURE.



“WARNING” – THE WARNING SYMBOL IDENTIFIES SPECIAL INSTRUCTIONS OR PROCEDURES WHICH, IF NOT CORRECTLY FOLLOWED, COULD RESULT IN PERSONAL INJURY.



“AVERTISSEMENT” – LE SYMBOLE AVERTISSEMENT IDENTIFIE DES INSTRUCTIONS OU PROCÉDURES SPÉCIALES QUI, SI ELLES NE SONT PAS SUIVIES CORRECTEMENT, POURRAIENT CAUSER UNE BLESSURE.



“CAUTION” – THE CAUTION SYMBOL IDENTIFIES SPECIAL INSTRUCTIONS OR PROCEDURES WHICH, IF NOT STRICTLY OBSERVED, COULD RESULT IN DAMAGE TO OR DESTRUCTION OF EQUIPMENT.



“PRÉCAUTION” – LE SYMBOLE DE PRÉCAUTION IDENTIFIE DES INSTRUCTIONS OU PROCÉDURES SPÉCIALES QUI, SI ELLES NE SONT PAS STRICTEMENT SUIVIES, POURRAIENT CAUSER UN DOMMAGE OU LA DESTRUCTION DE L’ÉQUIPEMENT.

“NOTE” – Note indicates points of particular or additional information.



“REMARQUE” – Remarque indique des points d’intérêt particulier ou des renseignements additionnels. la note indique des remarques d’information particulière ou supplémentaire.



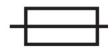
Type B, Applied Part



Standby



Dangerous Voltage / Shock Hazard



Fuse Rating Specification



Protective Earth Ground



Alternating Current-AC



Safe Working Load



“Attention, Consult Accompanying Documents”



Refer to Instruction Manual/Booklet



Do Not Push

TRANSPORTATION / STORAGE CONDITIONS

Temperature: Operating: 59 to 104° F
15 to 40° C
Storage: -22 to +140° F
-30 to +60° C

Relative Humidity: Operating: 5%RH to 95%RH
without condensation
Storage: 10%RH to 100%RH,
including condensation
Atmospheric Pressure:
Operating: 700hPa – 1060hPa
Storage: 500hPa – 1060 hPa

1. INTRODUCTION

- 1.1. This Installation and Operating Instruction contains information applicable only to the Reliance® Model 7900 Ophthalmic Instrument Stand also known as Floor Unit.
- 1.2. Should your product not perform properly, or if the product is in need of repair, or if you have any questions concerning the use and care of any Haag-Streit product, contact the Haag-Streit Distributor, where you purchased this product or contact the Technical Service Department, Haag-Streit USA, Inc., 3535 Kings Mills Road, Mason, Ohio 45040-2303, or call 800-787-5426.

NOTE: Always have the model number and serial number available before contacting Haag-Streit or your authorized Haag-Streit Distributor.

REMARQUE: Ayez toujours le numéro de modèle et le numéro de série à portée de la main avant de contacter Haag-Streit ou votre distributeur Haag-Streit autorisé.

“CLASSIFIED BY CANADIAN STANDARDS ASSOCIATION® CSA WITH RESPECT TO ELECTRIC SHOCK, FIRE AND MECHANICAL HAZARDS ONLY IN ACCORDANCE WITH IEC 60601-1 3RD EDITION.”

According to Clause 5 in IEC 60601-1, sec 6.8.1, this Unit is classified by the following:

- The type of protection against electric shock: EQUIPMENT energized from an external electrical power source: CLASS I EQUIPMENT
- The degree of protection against electric shock: TYPE B EQUIPMENT
- The degree of protection against harmful ingress of water: ORDINARY DEGREE
- The degree of safety of application in the presence of a FLAMMABLE ANESTHETIC MIXTURE WITH AIR or WITH OXYGEN OR NITROUS OXIDE: EQUIPMENT not suitable for use in the presence of a FLAMMABLE ANESTHETIC MIXTURE WITH AIR or WITH OXYGEN OR NITROUS OXIDE

- The mode of operation: CONTINUOUS OPERATION



WARNING: TO PREVENT FIRE OR ELECTRICAL SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.



AVERTISSEMENT: POUR ÉVITER UN INCENDIE OU UN RISQUE DE CHOC ÉLECTRIQUE, N'EXPOSEZ PAS CET ÉQUIPEMENT À LA PLUIE OU À L'HUMIDITÉ.

- 1.3. Recognized Accessories: Recognized medical devices and IT equipment include the following:

- Haag-Streit BI900, BM900, BP900, BQ900 Slit Lamps (w/ or w/out Imaging).
- Haag-Streit Elara 900 Slit Lamp.
- General purpose Computer Monitor, Mouse, Keyboard.
- Reichert digital phoropter VRx & Sightcheck.
- Essilor digital phoropter Vision R 800, APH550.
- Topcon digital phoropter CV-5000.
- Marco digital phoropter TRS-5100, TRS-6100.



WARNING: THE SYSTEM IS COMPATIBLE ONLY WITH THE DEVICES MENTIONED INSIDE THIS MANUAL. DO NOT CONNECT INCOMPATIBLE DEVICES TO THE SYSTEM.



AVERTISSEMENT: LE SYSTEME N'EST COMPATIBLE QU'AVEC LE DISPOSITIF MENTIONNE DANS LE MANUEL. NE JAMAIS BRANCHER DES INCOMPATIBLES DISPOSITIFS AU SYSTEME.



WARNING: BX900 SHOULD NEVER BE USED ON 7900 FLOOR UNIT.



AVERTISSEMENT: LE BX900 NE DOIT JAMAIS ÊTRE UTILISÉ SUR L'UNITÉ DE SOL 7900.



WARNING: DO NOT APPLY WHOLE WEIGHT OF BODY ON TABLETOP.




AVERTISSEMENT: N'APPLIQUEZ PAS TOUT LE POIDS DU CORPS SUR LE DESSUS DE LA TABLE.

TECHNICAL SPECIFICATIONS

Rating for 120V Instrument Stand


This equipment is rated Class I, Type B

Equipment		Model
Instrument Stand		7900
Volts	Hertz	Amps
120V	50/60	10.0
Class I	Type B	



Rating for 220-240V Instrument Stand

This equipment is rated Class I, Type B

Equipment		Model
Instrument Stand		7900
Volts	Hertz	Amps
220 - 240V	50/60	6.3
Class I	Type B	



IMPORTANT USER WARNINGS



WARNING: EXPLOSION HAZARD. THIS EQUIPMENT MUST NOT BE USED IN THE PRESENCE OF FLAMMABLE ANESTHETICS.



AVERTISSEMENT: RISQUE D'EXPLOSION. CET ÉQUIPEMENT NE DOIT PAS ÊTRE UTILISÉ EN PRÉSENCE D'ANESTHÉSQUES INFLAMMABLES.

POTENTIAL ELECTROMAGNETIC OR OTHER INTERFERENCE

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device.
- Increase the separation between equipment.
- Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected.
- Consult the manufacturer or field service technician for help.

DISPOSAL

This product contains lead. Check local ordinance or laws for proper disposal.

2. INSTALLATION



WARNING: INSTALLATION & REPAIRS MAY ONLY BE PERFORMED BY TRAINED TECHNICAL PERSONNEL.



AVERTISSEMENT: L'INSTALLATION ET LES RÉPARATIONS NE DOIVENT ÊTRE EFFECTUÉES QUE PAR DU PERSONNEL TECHNIQUE FORMÉ.



WARNING: NEVER OPERATE DEFECTIVE EQUIPMENT. CONTACT HAAG-STREIT TECH SERVICE IMMEDIATELY.



AVERTISSEMENT: NE JAMAIS FAIRE FONCTIONNER UN ÉQUIPEMENT DÉFECTUEUX. CONTACTEZ IMMÉDIATEMENT LE SERVICE TECHNIQUE HAAG-STREIT.

2.1. Unpacking

2.1.1. Base Unit

2.1.1.1. Remove all external shipping tapes and wrappings. Remove the Base Unit from the skid and set it in the desired, final location.



WARNING: ENSURE INSTRUMENT STAND IS PLACED ON A FLAT FLOOR FOR SUFFICIENT STABILITY.



AVERTISSEMENT: S'ASSURER QUE LA SUPPORT D'INSTRUMENT EST PLACÉE SUR UNE SURFACE PLANE ET DE NIVEAU AFIN D'ASSURER UNE STABILITÉ SUFFISANTE.

2.1.1.2. Loosen the two screws that hold the Back Cover (Figure 1) in place, located at the bottom of the Cover. Panel lifts off the Base Unit.

2.1.1.3. Squeeze the Slit Lamp Arm Lock Release Lever (Figure 1) and at the same time push down on Slit Lamp Arm. Arm should move approximately 1/4". Release the Lock Release Lever to set the Slit Lamp Arm lock.

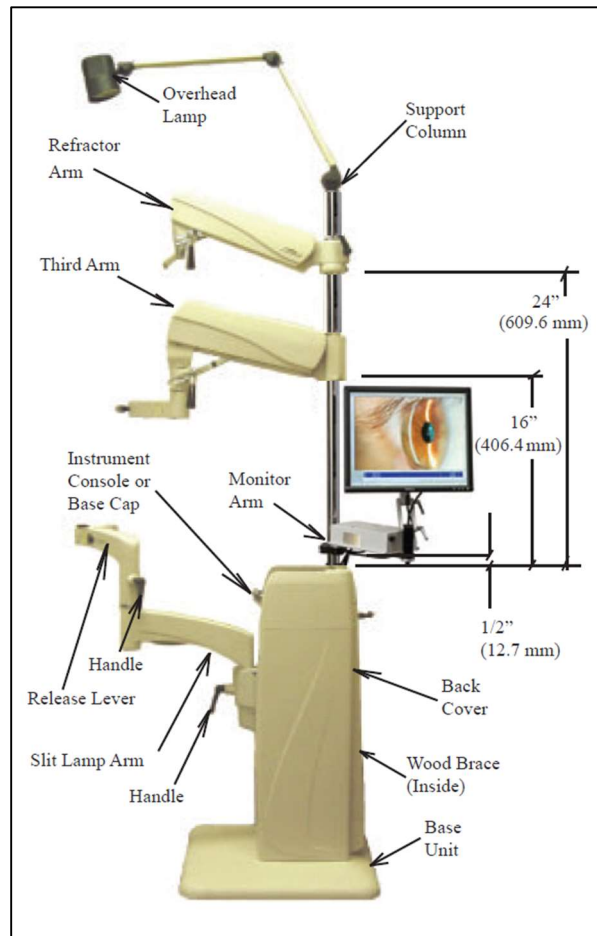
2.1.1.4. Inspect the Base Unit for any damage from transportation before proceeding.



WARNING: TO AVOID PERSONAL INJURY OR DAMAGE TO THE INSTRUMENT STAND CAUSED BY THE STAND TIPPING OVER, DO NOT OVERLOAD THE REFRACTOR ARM, THIRD ARM, OR SLIT LAMP ARM.



AVERTISSEMENT: POUR ÉVITER UNE BLESSURE OU UN DOMMAGE AU SUPPORT À INSTRUMENT CAUSÉ PAR UN RENVERSEMENT DU SUPPORT, NE SURCHARGEZ PAS LE BRAS RÉFRACTEUR, LE TROISIÈME BRAS OU LE BRAS DE LA LAMPE À FENTE.



**FIGURE 1
INSTRUMENT STAND PARTS & ACCESSORIES**



WARNING: TIP-OVER HAZARD: NEVER GROUP THREE INSTRUMENT ARMS TOGETHER ON ONE SIDE OF THE STAND. DISTRIBUTE INSTRUMENT WEIGHT AS EQUALLY AS PRACTICAL. AVOID FAST OR FORCEFUL MOVEMENT OF INSTRUMENT ARMS.



AVERTISSEMENT: RISQUE DE BASCULEMENT. NE REGROUPEZ JAMAIS LES TROIS BRAS D'INSTRUMENTS ENSEMBLE SUR UN CÔTÉ DU SUPPORT. DISTRIBUEZ LE POIDS DES INSTRUMENTS AUSSI ÉGALEMENT QUE POSSIBLE. ÉVITEZ UN MOUVEMENT RAPIDE OU VIOLENT DES BRAS D'INSTRUMENTS.



CAUTION: DO NOT PUSH UNIT WHEREVER YOU SEE A DO NOT PUSH LABEL.



PRÉCAUTION: NE PUSSEZ PAS L'UNITÉ PARTOUT OÙ VOUS VOYEZ UNE ÉTIQUETTE NE PAS POUSSER.

2.2. Instrument Console/Base Cap



CAUTION: THE POWER SUPPLY CORD SHOULD NOT BE CONNECTED TO THE POWER SUPPLY DURING THE INSTALLATION PROCESS.



PRÉCAUTION: LE CORDON D'ALIMENTATION NE DEVRAIT PAS ÊTRE CONNECTÉ AU BLOC D'ALIMENTATION DURANT LE PROCESSUS D'INSTALLATION.



NOTE: For units that has the Monitor Arm (See Fig. 1) see the Manual that accompanies the Monitor Arm.

REMARQUE: Pour les unités qui ont le bras de moniteur (voir Fig. 1), voir le manuel qui accompagne le bras de moniteur.



NOTE: If you are installing room light controls on this Instrument Stand, also refer to the "ECLIPSE® Room Light Control Operating Instructions Section."

REMARQUE: Si vous installez des commandes d'éclairage salle sur ce stand instrument, se reporter également à la "ECLIPSE® light salle de contrôle d'exploitation des instructions de l'article."

2.2.1. Replacement or Repair

In the event that the Instrument Console or Base Cap must be mounted or removed for replacement or repair purposes, it will be necessary to temporarily remove any assemblies on the Support Column. To install a Console, connect the four connectors on top of the Base Unit to the matching connectors hanging from the bottom of the Console.

The Lamp Jumper Cable will drop through the large opening and be connected to the matching connector that hangs from underneath the Support Column. Figure 2 illustrates the connections that must be made. Align the two pins located near the front of the Console

in the matching holes on top of the Base Unit. Gently push the Console down to secure.

To disassemble or remove the Console, pull the Console up in the front and disconnect the four connectors from the Base Unit. As mentioned above, any assemblies on Support Column must be removed before the Console itself can be removed. If the Overhead Lamp has not already been removed, the Lamp Jumper must be disconnected from the lamp plug under the Support Column.

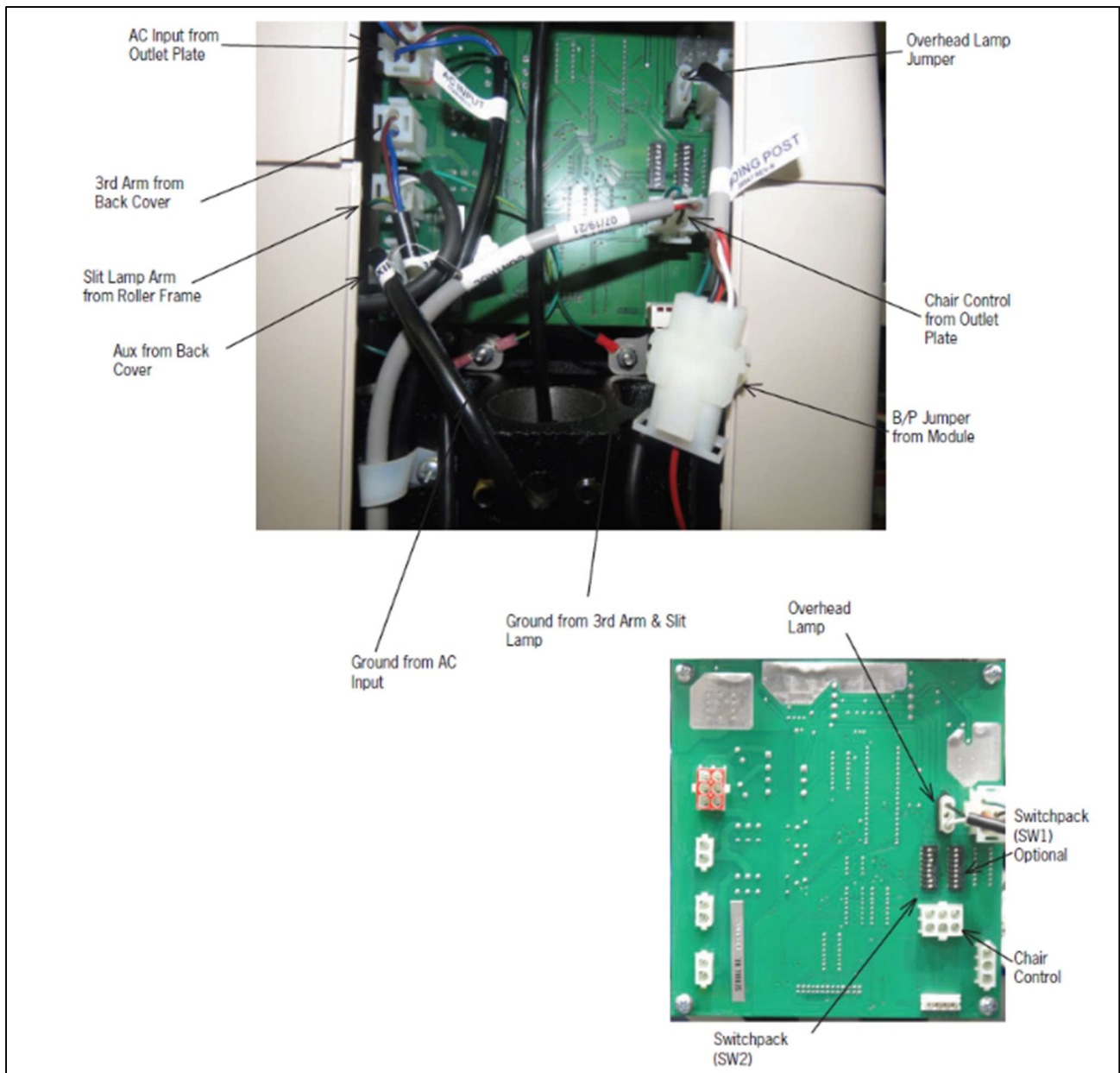


FIGURE 2
INSTRUMENT CONSOLE/BASE CAP CONNECTIONS

2.3. Support Column Installation

Unwrap the Support Column and inspect for any damage from transportation before proceeding. Remove the column Support Pin and the Collar from the Installation Packet. Insert the Column in the hole at the top of the Base Unit.

CAUTION: ENSURE THERE IS A CLEAR PATH FOR THE SUPPORT COLUMN BETWEEN THE OPENING IN THE CONSOLE AND THE HOLE IN THE BASE FRAME. IF CABLES IMPEDE PATH SIMPLY MOVE THEM ASIDE.

PRÉCAUTION: ASSUREZ-VOUS QU'IL Y A UN PASSAGE DÉGAGÉ POUR LA COLONNE DE SOUTIEN ENTRE L'OUVERTURE DANS LA CONSOLE ET LE TROU DANS LE CADRE DE LA BASE. SI DES CÂBLES NUISENT, PUSSEZ-LES SIMPLEMENT DE CÔTÉ.

Line up the hole in the Column with the hole in the Base Unit and insert the Support Pin. Note that the small screw at the top of the Column faces the rear of the Base Unit. Tighten the set screws under the Support Pin. Slide the Collar down firmly against the Console/Base Cap. Tighten small set screw.

2.4. Configuring the System

CAUTION: IF THE DIP SWITCHES ARE NOT CONFIGURED PROPERLY BEFORE TURNING ON POWER TO THE EQUIPMENT VIA THE STBY SWITCH, DAMAGE TO THE EQUIPMENT OR INSTRUMENT BULBS MAY OCCUR.

PRÉCAUTION: SI LES COMMUTATEURS DIP NE SONT PAS CONFIGURÉS CORRECTEMENT AVANT D'ACTIVER L'ALIMENTATION À L'ÉQUIPEMENT PAR L'INTERRUPTEUR STBY (EN ATTENTE), UN DOMMAGE À L'ÉQUIPEMENT OU AUX BULBES D'INSTRUMENT PEUT SE PRODUIRE.

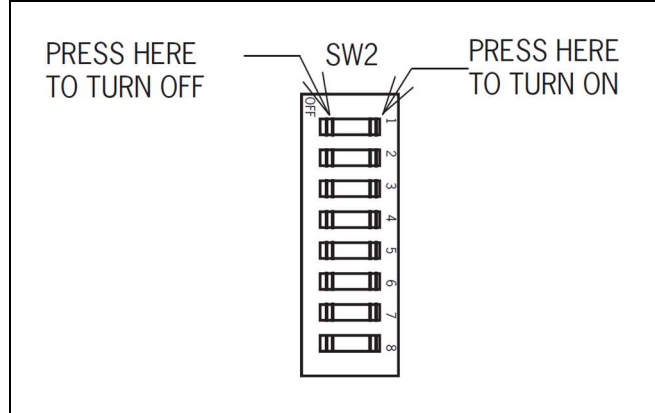
2.4.1. Console: Configuring Dip Switches on the Circuit Board (SW2)

2.4.1.1. Switchpack SW2 on the Console must be configured for proper operation of the Stand.

Individual switches 1, 2 and 3 control the voltage and power to the Indirect Ophthalmoscope. See Table 1.

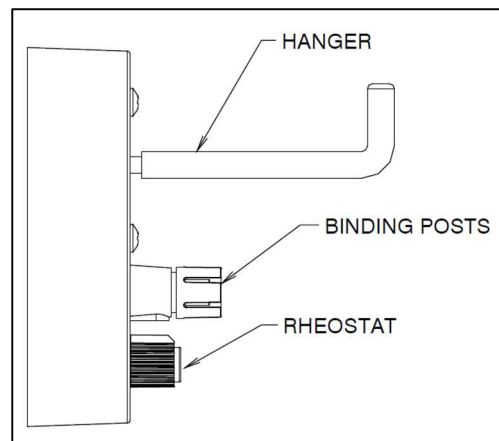
**TABLE 1
SWITCH SETTINGS FOR B/P VOLTAGES**

SW2-1	SW2-2	SW2-3	B/P VOLTAGE
OFF	OFF	OFF	6.5V/18W INCANDESCANT
OFF	OFF	ON	6V/10W HALOGEN
ON	OFF	ON	6V/20W HALOGEN
OFF	ON	ON	12V/12W HALOGEN



Switch 4

- Turn Switch 4 ON if your system contains an indirect hanger (Figure 3) for an Indirect Ophthalmoscope and you want that hanger to automatically supply power to the Instrument.
- Turn Switch 4 OFF if your system does not contain a hanger for an Indirect Ophthalmoscope. In this case, power is turned ON and OFF to the Instrument via the B/P Switch on the front panel (See Section 4.8.3.1 if you have the optional Eclipse® IR Room Light Control System and would like the B/P Switch to affect room lights).



**FIGURE 3
INDIRECT HANGER SWITCH**

Switch 5

- If you want your system to beep whenever a switch is pressed, set Switch 5 ON.
- If you do not want to hear a beep whenever a switch is pressed, set Switch 5 OFF.

Switches 6, 7, and 8

- Reserved.

2.4.2. Base Cap: Configuring the Beep-On Switch Feature

2.4.2.1. The Base Cap has one configurable feature unrelated to the Eclipse® Room Light Controls: the Beep-on-Switch Feature. The Factory Default Setting for the Beep-on-Switch Feature is Off. The following programming sequence is required if you want to turn the Beep-on-Switch Feature On.

To configure the Base Cap Beep-on-Switch Feature:

- Turn Off the Overhead Lamp.
- Press and hold the Lamp Down Switch for five (5) seconds.
- If a 1-second beep is heard, the Beep-on-Switch Feature has been turned On.
- If a short 0.2-second beep is heard, the Beep-on-Switch Feature has been turned Off.
- Simply press and hold the Lamp Up Switch for five (5) seconds to toggle the Beep-on-Switch Feature On and Off.

2.5. Third Arm

2.5.1. If supplied, unpack the Third Arm and inspect for any damage from transportation before proceeding. Slide the Clamp Sleeve carefully down over the Support Column until positioned as shown in Figure 1. Tighten the clamp screw using the hex key wrench provided.

2.5.2. Position the Clamp initially so that the clamp screw is toward the rear of the Base Unit. If necessary, this position can be altered to center the rotation of the arm about the Column (300°) within the desired range of movement.

2.5.3. Springs are used to counterbalance the Instrument mounted on the arm. Adjustment of the springs is by means of a screw which is accessible upon removal of Plug Button. Rotating the screw clockwise increases the tension. With the Instrument in place, adjust the screw to balance the Instrument.

2.5.4. Plug the Third Arm into the receptacle marked "3RD ARM" located on the Console or Base Cap (See Figure 4).

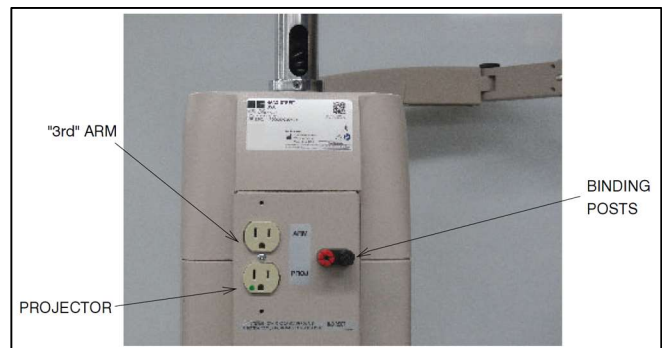


FIGURE 4
REAR VIEW OF CONSOLE ASSEMBLY

WARNING: THE MAINS OUTLET LOCATED ON THE BACK OF THE CONSOLE OR BASE CAP MARKED "ARM" AND THE MAINS OUTLET LOCATED ON THE THIRD ARM ITSELF, ARE INTENDED TO SUPPLY POWER TO A KERATOMETER OR SIMILAR MEDICAL DEVICE COMPLYING WITH IEC 60601-1. ONCE CONNECTED, RESULTING LEAKAGE CURRENTS MUST COMPLY WITH IEC 60601-1-1 FOR MEDICAL ELECTRICAL (ME) SYSTEMS. DO NOT CONNECT UNAUTHORIZED DEVICES.



AVERTISSEMENT: LA PRISE DE COURANT SITUÉE À L'ARRIÈRE DE LA CONSOLE OU DU COUVERCLE MARQUÉE "ARM" (BRAS) ET LA PRISE DE COURANT SITUÉE SUR LE TROISIÈME BRAS LUI-MÊME SONT CONÇUES POUR FOURNIR L'ALIMENTATION À UN KÉRATOMÈTRE OU AUTRE APPAREIL MÉDICAL SIMILAIRE CONFORME AVEC IEC 60601-1. UNE FOIS L'APPAREIL CONNECTÉ, LES COURANTS DE FUITE RÉSULTANTS DOIVENT ÊTRE CONFORMES À IEC 60601-1-1 POUR LES SYSTÈMES ÉLECTRIQUES MÉDICAUX. NE CONNECTEZ PAS DE DISPOSITIFS NON AUTORISÉS.



2.6. Refractor Arm – Dual Lock

2.6.1. Unpack the Refractor Arm and inspect for any damage from transportation before proceeding. Slide the Clamp Sleeve carefully down over the Support Column until positioned as shown in Figure 1. Tighten the clamp screw securely, using the hex key wrench provided.

2.6.2. Note that the chrome Plug Button in the front of the Refractor Arm Assembly covers the counterbalance spring adjusting screw. If necessary, after the Instrument is attached to the Refractor Arm, remove this button and adjust the screw, turning it clockwise to increase tension. Optimum adjustment is reached when the Refractor Arm barely supports the weight at the upper limit of its travel. The Refractor Arm will support Instruments weighing a maximum of 20 pounds.

2.6.3. (For Wheelchair Version Only) Remove Collar from installation packet. Slide the Collar down over the Support Column to the desired position (reference picture on cover page) and tighten the set screw securely.

2.7. Overhead Lamp

2.7.1. Unpack the Overhead Lamp Assembly and inspect for any damage from transportation before proceeding. Feed the Lamp Cord and Coiled Extension Cord into the top of the Support Column until the Overhead Lamp can be inserted into the Column.

2.7.2. Remove the Support Tube Pin to allow the Overhead Lamp Cord to drop through the Support Column. Replace the Support Pin, being careful not to pinch the Overhead Lamp Cord. Insert the plug from the Overhead Lamp Extension Cord into the matching connector hanging down from the rear of the Console.

2.8. Final Assembly

2.8.1. Console/Base Cap

If any additional Instrument is to be connected to the Binding Posts or if any auxiliary equipment is to be plugged into the outlets, make these connections at this time (See Figure 4).

2.9. Slit Lamp Arm

2.9.1. After slit lamp arm is unpacked and set into place, the option of changing the instrument stand can be done at this time. For example, if the unit is ordered as a right-handed and needed to be changed to left-handed unit; follow the listed instructions below.

2.9.1.1. To convert the Slit Lamp Arm to a left-handed unit, remove the four (4) #8-32 Screws that hold the Cover Plates with the Outlet and Rocker Switch to the Upper Arm. Carefully pull the Plates off of the Upper Arm. Loosen the center Screw holding the two plates together but do not completely remove it. Pull the two Plates apart and rotate them so the Outlet and Rocker Switch are now on the opposite side of the Upper Arm. Be careful not to pinch any wires between the Plates and the Upper Arm when making this change.

2.9.1.2. Loosen the three Set Screws that lock the Arm Extension in place at the end of the Slit Lamp Arm. Loosen the Black Handle on top of the Slit Lamp Arm. Rotate Arm Extension so it is approximately 60 degrees from the side of the Upper Arm of the Slit Lamp Arm and tighten the Set Screws. Tighten the Black Handle on top of the Slit Lamp Arm. Remove Adjustable Handle and Plug Button from the Arm Extension and place them on the opposite side they were on. (See Figure 5) and (See Figures 5A, 5B, 5C, 5D details).

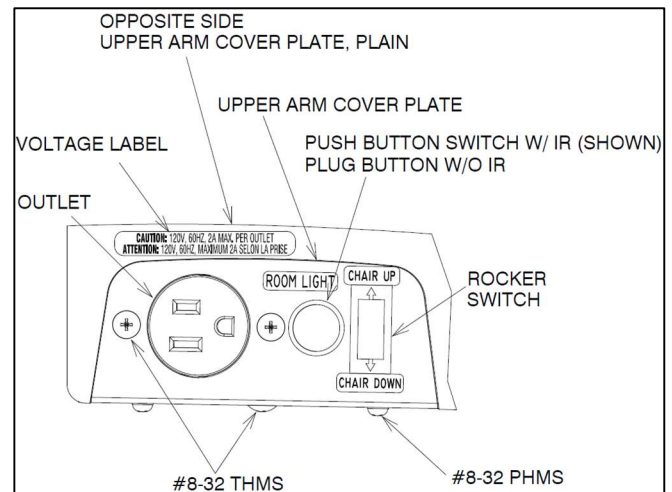


FIGURE 5
SLIT LAMP ARM COVER PLATE

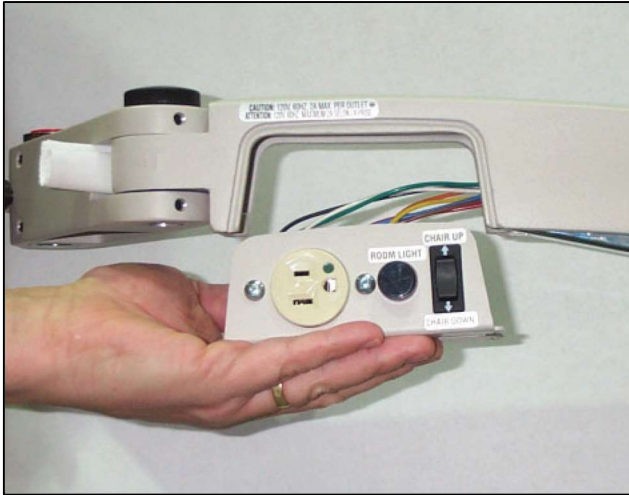


FIGURE 5A

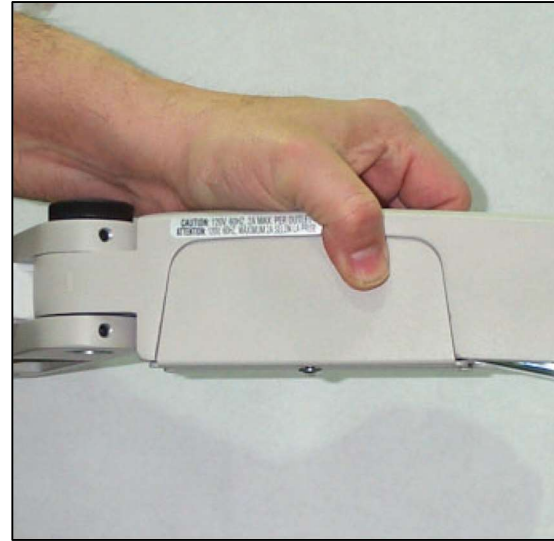


FIGURE 5D

(FIGURES 5A-5D) REFERENCE TO CHANGING THE INSTRUMENT STAND FROM A RIGHT-HAND TO A LEFT-HANDED UNIT

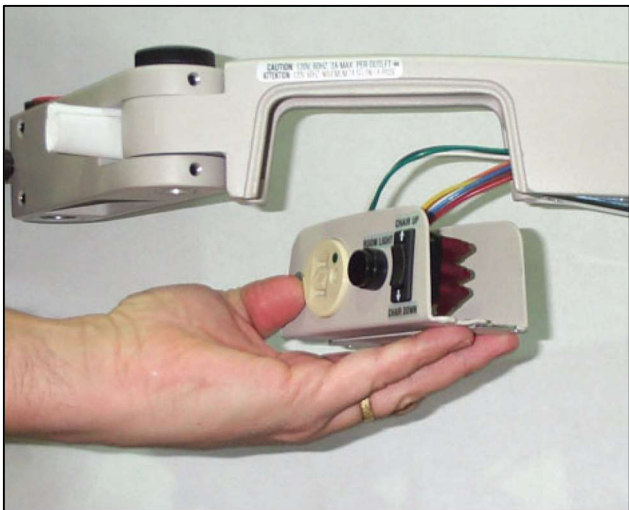


FIGURE 5B

2.10. Chair Control

2.10.1. The chair control switches located on the Floor Unit may control any Reliance® low voltage chair. To provide power to the chair plug in chair power cord (See Figure 6). Refer to the chair's Installation and Operating Instructions for unpacking and assembling the chair.

2.10.2. A Chair Control Cable is provided to control the vertical movement of the Chair Base from the Floor Unit. One end of the cable is to be inserted into the black circular receptacle on the Outlet Plate Assembly (See Figure 6). Push the socket into the connector and twist clockwise to lock. The other end of the cable is to be inserted into the mating receptacle marked "CHAIR CONTROL CABLE" in the rear of your Reliance® chair.

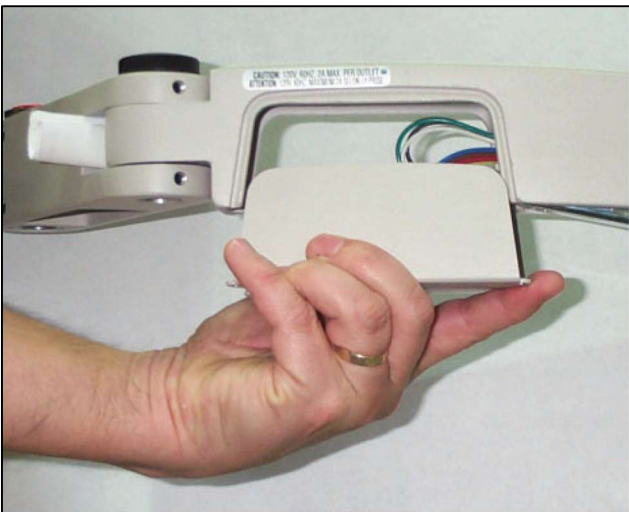
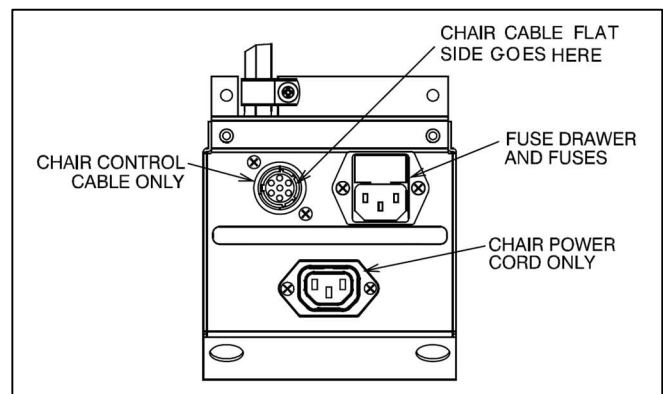


FIGURE 5C



**FIGURE 6
OUTLET PLATE ASSEMBLY**



CAUTION: ACCESSORY EQUIPMENT CONNECTED TO ANALOG AND DIGITAL INTERFACES MUST BE CERTIFIED ACCORDING TO THE RESPECTIVE IEC STANDARDS (I.E. IEC 60950 FOR DATA PROCESSING EQUIPMENT AND IEC 60601-1 FOR MEDICAL EQUIPMENT). FURTHERMORE, ALL CONFIGURATIONS SHALL COMPLY WITH IEC 60601-1-1 FOR MEDICAL EQUIPMENT SYSTEMS. ANYONE WHO CONNECTS ADDITIONAL EQUIPMENT TO THE SIGNAL INPUT PART (SIP) OR SIGNAL OUTPUT PART (SOP) CONFIGURES A MEDICAL SYSTEM, AND IS THEREFORE RESPONSIBLE THAT THE SYSTEM COMPLIES WITH THE REQUIREMENTS OF IEC 60601-1-1. IF IN DOUBT, CONSULT THE TECHNICAL SERVICE DEPARTMENT, OR YOUR LOCAL HAAG-STREIT DISTRIBUTOR.



PRÉCAUTION: L'ÉQUIPEMENT ACCESSOIRE CONNECTÉ AUX INTERFACES ANALOGUES ET DIGITALES DOIT ÊTRE CERTIFIÉ SELON LES NORMES IEC RESPECTIVES (C.-À-D., IEC 60950 POUR L'ÉQUIPEMENT DE TRAITEMENT DE DONNÉES ET IEC 60601-1 POUR L'ÉQUIPEMENT MÉDICAL). DE PLUS, TOUTES LES CONFIGURATIONS DOIVENT ÊTRE CONFORMES À IEC 60601-1-1 POUR LES SYSTÈMES ÉLECTRIQUES MÉDICAUX. QUICONQUE CONNECTE DE L'ÉQUIPEMENT SUPPLÉMENTAIRE À LA PARTIE ENTRÉE DE SIGNAL OU À LA PARTIE SORTIE DE SIGNAL CONFIGURE UN SYSTÈME MÉDICAL ET EST PAR CONSÉQUENT RESPONSIBLE DE LA CONFORMITÉ DU SYSTÈME AVEC LES EXIGENCES DE IEC 60601-1-1. EN CAS DE DOUTE, CONSULTEZ LE SERVICE TECHNIQUE OU VOTRE DISTRIBUTEUR HAAG-STREIT LOCAL.



WARNING: THE MAINS OUTLET LOCATED ON THE OUTLET PLATE ASSEMBLY IS INTENDED TO SUPPLY POWER TO A HAAG-STREIT PATIENT EXAMINATION CHAIR OR SIMILAR MEDICAL DEVICE COMPLYING WITH IEC 60601-1. ONCE CONNECTED, RESULTING LEAKAGE CURRENTS MUST COMPLY WITH IEC 60601-1-1 FOR MEDICAL ELECTRICAL (ME) SYSTEMS. DO NOT CONNECT UNAUTHORIZED DEVICES.



AVERTISSEMENT: LA PRISE DE COURANT SITUÉE SUR L'ASSEMBLAGE DE PLAQUE DE COURANT EST CONÇUE POUR FOURNIR L'ALIMENTATION À UNE CHAISE D'EXAMEN DE PATIENT HAAG-STREIT OU À UN DISPOSITIF MÉDICAL SIMILAIRE CONFORME À IEC 60601-1. UNE FOIS L'APPAREIL CONNECTÉ, LES COURANTS DE FUITE RÉSUULTANTS DOIVENT ÊTRE CONFORMES À IEC 60601-1-1 POUR LES SYSTÈMES ÉLECTRIQUES MÉDICAUX. NE CONNECTEZ PAS DE DISPOSITIFS NON AUTORISÉS.

2.11. Miscellaneous

2.11.1. When attaching an instrument to the Slit Lamp Arm, note the Thrust Bearing which should be in place between the instrument and the arm. See Figure 7.

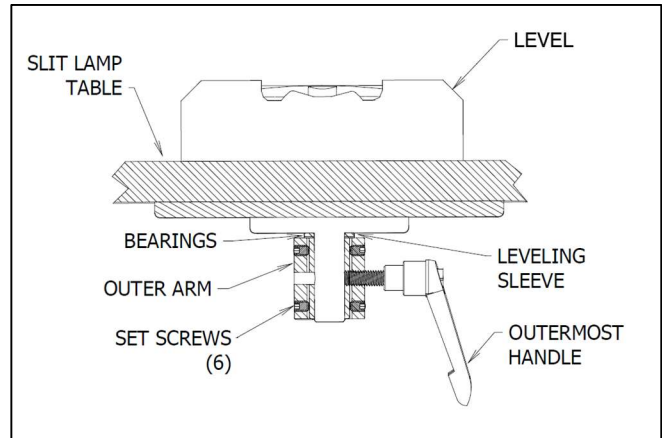


FIGURE 7
SLIT LAMP TABLE LEVELING

2.11.2. Proper balance of an Instrument on the Slit Lamp Arm is achieved by adding or removing counter-balance weights as shown in Figure 8. See Table 2 for weight settings.



WARNING: TO AVOID PERSONAL INJURY, ALWAYS BRING SLIT LAMP ARM ALL THE WAY UP TO BRING COUNTERWEIGHTS ALL THE WAY DOWN BEFORE REMOVING COVERS OR HOUSING FOR ANY REPAIRS OR ADJUSTMENTS.



AVERTISSEMENT: POUR ÉVITER TOUTE BLESSURE, TOUJOURS RELEVER COMPLÈTEMENT LE BRAS DE LA LAMPE À FENTE AFIN D'ABAISSEZ COMPLÈTEMENT LES CONTREPOIDS AVANT DE RETIRER LES COUVERCLES OU LE BOÎTIER POUR EFFECTUER DES RÉPARATIONS OU DES RÉGLAGES.

2.12.2. To disconnect power from the Instrument Stand, unplug the power cord from wall receptacle.

3. ATTACHING OUTLET COVERS (NEEDED ONLY IN ACCORDANCE WITH IEC 60101-1 3RD EDITION)



NOTE: Be sure to unplug the power cord from the wall outlet.

REMARQUE: Assurez-vous de débrancher le cordon d'alimentation de la prise murale.

3.1. Slit Lamp Arm Cover

3.1.1. Loosen the 2 screws that secure the Outlet and Slit Lamp Arm Cover by inserting the screwdriver through the hole and slide cover up to remove. For a visual guide use the cutout located on the top of the Cover (See Figure 9).



FIGURE 8

ADDING/REMOVING COUNTER-BALANCE WEIGHTS



FIGURE 9

SLIT LAMP ARM COVER CUTOUTS

TABLE 2: WEIGHT SETTINGS – SLIT LAMP ARM CHART

INSTRUMENT GROSS WEIGHT – LBS (KG)	INCREMENTAL WEIGHTS
12-22 (5.44-9.98)	None
23-30 (10.43-13.61)	Light
31-35 (14.06-15.88)	2 Light
36-40 (16.33-18.14)	Light, Heavy
41-45 (18.6-20.41)	2 Medium, Heavy
46-53 (20.87-24.04)	Light, 2 Medium, Heavy
54-58 (24.49-26.31)	2 Light, 2 Medium, Heavy
59-60 (26.76-27.22)	2 Light, Medium, 2 Heavy
Light ~ 5lbs, Medium ~ 7.5lbs, Heavy ~ 10lbs	

3.1.2. Plug in the Accessory.

3.1.3. Retrieve the Grommet from the installation packet. Place Grommet around the Power Cord, push the Power Cord into the slot on the Cover, and press the Grommet into the hole in the Cover (See Figure 10).

2.12. Powering on Unit

2.12.1. Plug the power cord into a wall receptacle and check all electrical functions as described in the Operating Instructions. If all functions work, re-attach the Back Cover.

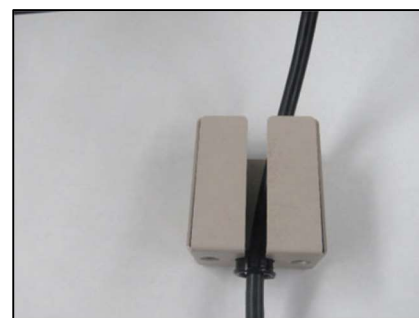


FIGURE 10

POWER CORD & GROMMET ON SLIT LAMP ARM COVER

3.1.4. Slide Slit Lamp Arm Cover back onto the Upper Arm Cover Plate and tighten the (2) screws that were loosened earlier.

3.2. Back Panel Cover

3.2.1. With a #2 Phillips Head Screwdriver remove the (2) screws that secure the Back Panel Cover (See Figure 11) (Set these screws to the side). Figure 12 shows back panel with cover off.



FIGURE 11
BACK PANEL COVER



FIGURE 12
BACK PANEL WITH COVER REMOVED

3.2.2. Plug in the Accessory/Accessories.

3.2.3. Retrieve 2 Grommets from the installation packet. Place Grommet around the Power Cord, push the Power Cords into the slot on the Cover, and press the Grommet into the hole in the Cover (See Figure 13).



FIGURE 13
BACK PANEL CONNECTIONS

3.2.4. Re-attach the Cover using the (2) screws that were removed earlier.

3.3. Third Arm Assembly Cover

3.3.1. With a #2 Phillips Head Screwdriver loosen the (2) screws that secure the outlet and the cover on the Third Arm and slide cover up to remove.

3.3.2. Retrieve a Grommet from the installation packet. Place Grommet around the Power Cord, push the Power Cords into the slot on the Cover, and press the Grommet into the hole in the Cover (similar to Slit Lamp Arm Cover in Figure 10).

3.3.3. Plug in the Accessory.

3.3.4. Slide the Third Arm Assembly Cover back on and tighten the (2) screws that were loosened earlier.

4. OPERATING INSTRUCTIONS



WARNING: ONLY TRAINED/QUALIFIED PERSONNEL SHOULD OPERATE INSTRUMENT STAND.



AVERTISSEMENT: SEUL LE PERSONNEL FORMÉ ET QUALIFIÉ DOIT UTILISER LA SUPPORT D'INSTRUMENT.

4.1. Slit Lamp Arm



WARNING: SLIT LAMP ARM WILL RISE ABRUPTLY IF RELEASE LEVER IS DEPRESSED AND ARM IS NOT COUNTER-BALANCED.



AVERTISSEMENT: LE BRAS DE LA LAMPE À FENTE SE LÈVERA ABRUPTEMENT SI LE LEVIER DE DÉGAGEMENT EST PRESSÉ ET QUE LE BRAS N'EST PAS CONTREBALANCÉ.

4.1.1. The Slit Lamp Arm is counterbalanced by means of weights and all its movements are controlled manually.

4.1.2. The vertical lock for this arm is controlled by the Lock Release Lever located under the Slit Lamp Arm (See Figure 1). Grip the Slit Lamp Arm and depress the Lock Release Lever to unlock the Slit Lamp Arm. Releasing the Lock Release Lever will lock vertical travel in both directions.

4.1.3. Incremental weights are added or removed to achieve proper balance in accordance with the Weight Settings – Slit Lamp Arm Chart. (See Table 2).

4.1.4. The handle under the innermost pivot point of the Slit Lamp Arm (Figure 1) is to restrain rotation of the complete arm assembly. The handle at the intermediate joint on the Slit Lamp Arm locks rotation of the outer arm section. The handle directly under the Slit Lamp locks rotation of the Instrument about its pivot point.

4.1.5. The outer end of the Slit Lamp Arm contains a Leveling Sleeve and six set screws for field re-leveling of the Instrument, if necessary. A hex key wrench (1/8) and a small, accurate level will be required. Remove the Instrument from the table and refer to Figure 7. The outermost Handle must be threaded into the Leveling

Sleeve, but not tightened. Rotate the Slit Lamp Arm to the examining position and tighten the other (2) handles. It may be necessary to loosen several set screws to reposition screws securely and check level again.



WARNING: WITH INSTRUMENT REMOVED, ARM WILL RISE ABRUPTLY IF RELEASE LEVER IS DEPRESSED.



AVERTISSEMENT: L'INSTRUMENT ÉTANT RETIRÉ, LE BRAS DE LA LAMPE À FENTE SE LÈVERA ABRUPTEMENT SI LE LEVIER DE DÉGAGEMENT EST PRESSÉ.

4.1.6. The outermost Handle can be adjusted to any preferred, locked position. Simply pull out on handle, rotate as desired, and release.

4.1.7. The Outer Arm contains an outlet for Instrument power, and a Rocker Switch to control vertical movement of the chair. The Chair Control Cable must be installed (Refer to Section 2.10). Depress the "UP" arrow on the switch to raise the chair. Depress the "Down" arrow to lower the chair.



WARNING: THE MAINS OUTLET LOCATED ON THE SLIT LAMP ARM IS INTENDED TO SUPPLY POWER TO A SLIT LAMP COMPLYING WITH IEC 60601-1. ONCE CONNECTED, RESULTING LEAKAGE CURRENTS MUST COMPLY WITH IEC 60601-1-1 FOR MEDICAL ELECTRICAL (ME) SYSTEMS. DO NOT CONNECT UNAUTHORIZED DEVICES.



AVERTISSEMENT: LA PRISE DE COURANT SITUÉE SUR LE BRAS DE LA LAMPE À FENTE EST CONÇUE POUR FOURNIR L'ALIMENTATION À UNE LAMPE À FENTE CONFORME À IEC 60601-1. UNE FOIS L'APPAREIL CONNECTÉ, LES COURANTS DE FUITE RÉSULTANTS DOIVENT ÊTRE CONFORMES À IEC 60601-1-1 POUR LES SYSTÈMES ÉLECTRIQUES MÉDICAUX. NE CONNECTEZ PAS DE DISPOSITIFS NON AUTORISÉS.

NOTE: Switch action is momentary; but may be programmed to function as maintained depending on the chair model. See chair manual for programming instructions.

REMARQUE: L'action de l'interrupteur est «momentané», mais peut être programmé pour fonctionner comme «maintenu» selon le modèle de chaise. Consultez le manuel de chaise pour les instructions de programmation.

4.2. Third Arm

4.2.1. Three handles control all motions of this Arm Assembly. The one nearest the Column controls rotation about the Support Column. The lever at the pivot point of the Outer Arm controls both vertical movement and the rotation of the Outer Arm. The small handle in the Outer Arm controls rotation of the Instrument at the outermost pivot point.

4.2.2. Adjustment of the Spring counterbalance is as described in the Installation Instructions, Section 2.5.3.

4.3. Refractor Arm

4.3.1. If the Refractor Arm is of the dual lock style, the handle nearest the Support Column controls the clamp for locking rotation of the entire Refractor Arm Assembly about the column. The Release Lever locks the vertical movement and the handle locks rotation of the Outer Arm.

4.3.2. Refer to the Installation Instructions 2.6.2 for the method of adjusting the counterbalancing spring.

4.4. Overhead Lamp

4.4.1. Movements of the Overhead Lamp arms are controlled by friction and spring-compensated joints, each of which is adjustable. Tighten all three handles with moderate hand pressure. This will allow you to move the Overhead Lamp easily. The Overhead Lamp should hold its position without repeated handle adjustments. The Overhead Lamp has an ON/OFF switch located at the top of the head, which can be controlled separately from the Instrument Stand. (Standby switch must be on for Overhead lamp to operate.)

4.5. Instrument Console/Base Cap

4.5.1. The Instrument Console or Base Cap contains electrical controls for the entire Unit. Refer to Figures 14, 15, and 16 for the location of controls and other parts.

4.5.2. Hand Instrument Wells – Rechargeable Battery Type (Console only)

4.5.2.1. The Rechargeable Battery Well is internally connected to the charging circuit at the factory and will charge Instruments with 3.5V NiCd batteries as long as the Instrument handle is fully seated in the well.

4.5.2.2. An indicator light (LED), located above each rechargeable well is supplied as a visual aid for determining that Instrument is properly seated in the well and is recharging.

NOTE: Welch Allyn offers an adapter that allows their Li-Ion Handles to operate correctly with Haag-Streit Rechargeable Battery Wells. Contact your Authorized Haag-Streit Distributor or Welch Allyn for details.

REMARQUE: Welch Allyn offre un adaptateur qui permet à leurs manettes lithium ion de fonctionner correctement avec les compartiments de batterie rechargeable Haag-Streit. Contactez votre distributeur autorisé Haag-Streit ou Welch Allyn pour plus de détails.

WARNING: RECHARGEABLE BATTERY WELLS HAVE BEEN TESTED WITH “WELCH ALLYN LI-ION BATTERY HANDLES” AND FOUND TO BE COMPATIBLE. LI-ION BATTERY HANDLES FROM OTHER MANUFACTURERS HAVE NOT BEEN TESTED AND CANNOT BE RECOMMENDED AT THIS TIME.





AVERTISSEMENT: LES COMPARTIMENTS POUR BATTERIE RECHARGEABLE ONT ÉTÉ TESTÉS AVEC LES «MANETTES DE BATTERIE LITHIUM ION WELCH ALLYN» ET ONT ÉTÉ DÉCLARÉS COMPATIBLES. LES MANETTES DE BATTERIE LITHIUM ION D'AUTRES FABRICANTS N'ONT PAS ÉTÉ TESTÉES ET NE PEUVENT PAS ÊTRE RECOMMANDÉES EN CE MOMENT.



CAUTION: THE LAMP INSIDE THE RECHARGEABLE INSTRUMENT MUST BE TURNED OFF BEFORE INSERTING THE HANDLE INTO THE WELL. HANDLES WILL CHARGE CONTINUOUSLY AS LONG AS THE POWER SUPPLY CORD IS ATTACHED TO THE EQUIPMENT.



PRÉCAUTION: LA LAMPE À L'INTÉRIEUR DE L'INSTRUMENT RECHARGEABLE DOIT ÊTRE DÉSACTIVÉE AVANT D'INSÉRER LA MANETTE DANS LE COMPARTIMENT. LES MANETTES SE CHARGERONT CONTINUELLEMENT AUSSI TEMPS QUE LE CORDON D'ALIMENTATION EST FIXÉ À L'ÉQUIPEMENT.



WARNING: THE MAINS OUTLET LOCATED ON THE BACK OF THE CONSOLE OR BASE CAP MARKED "PROJ" IS INTENDED TO SUPPLY POWER TO A PROJECTOR OR SIMILAR MEDICAL DEVICE COMPLYING WITH IEC 60601-1. ONCE CONNECTED, RESULTING LEAKAGE CURRENTS MUST COMPLY WITH IEC 60601-1-1 FOR MEDICAL ELECTRICAL (ME) SYSTEMS. DO NOT CONNECT UNAUTHORIZED DEVICES.



AVERTISSEMENT: LA PRISE DE COURANT SITUÉE À L'ARRIÈRE DE LA CONSOLE OU DU COUVERCLE DE LA BASE MARQUÉE «PROJ» EST CONÇUE POUR FOURNIR L'ALIMENTATION À UN PROJECTEUR OU AUTRE APPAREIL MÉDICAL SIMILAIRE CONFORME AVEC IEC 60601-1. UNE FOIS L'APPAREIL CONNECTÉ, LES COURANTS DE FUITE RÉSULTANTS DOIVENT ÊTRE CONFORMES À IEC 60601-1-1 POUR LES SYSTÈMES ÉLECTRIQUES MÉDICAUX. NE CONNECTEZ PAS DE DISPOSITIFS NON AUTORISÉS.

4.6. Front Panel Controls

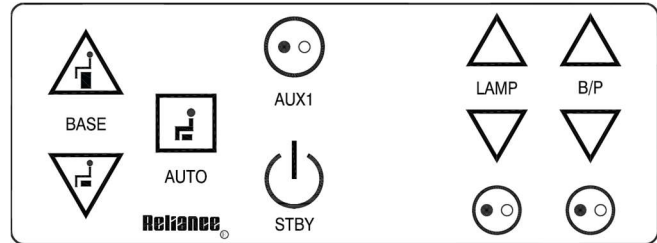


FIGURE 14

CONSOLE FRONT PANEL WITHOUT INFRARED

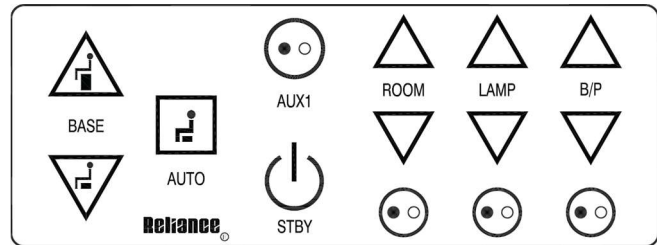


FIGURE 15

CONSOLE FRONT PANEL WITH INFRARED

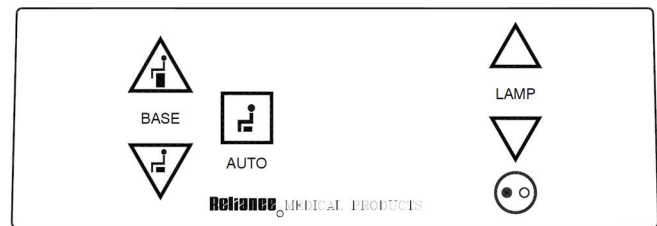


FIGURE 16

BASE CAP FRONT PANEL

4.6.1. The controls for the Stand are located on the panel above the Instrument Wells. Refer to Figures 14, 15 and 16 for identification of the various controls.

4.6.1.1. Standby Switch (STBY)

By pressing the Standby switch, it:

- Turns secondary power ON and OFF to the system.
- Turns the STBY, BASE, and AUTO LED's ON.
- Applies MAIN power to the S/L ARM and AUX power connectors if on.
- Disables all system functions, except charging of the Instrument Wells and chair functions when in the OFF position.

4.6.1.2. Auxiliary Switch (AUX1)

By pressing the Auxiliary switch, it:

- Turns MAIN power ON and OFF to the PROJ power connector.
- Turns the AUX LED ON when MAIN power is applied to the PROJ power connector.
- The primary purpose of the switch is to turn the projector ON and OFF.



WARNING: MAIN POWER (120VAC OR 230VAC) IS ALWAYS PRESENT INSIDE THE SYSTEM WHEN THE POWER CORD IS PLUGGED INTO THE WALL.



AVERTISSEMENT: L'ALIMENTATION ÉLECTRIQUE PRINCIPALE (120 VCA OU 230 VCA) EST TOUJOURS PRÉSENTE À L'INTÉRIEUR DU SYSTÈME LORSQUE LE CORDON D'ALIMENTATION EST BRANCHÉ AU MUR.

4.6.1.3. Room Light Switch (ROOM)

- Dual-Zone turns the ROOM Lights OFF or ON to a pre-programmed intensity.
- Single-Zone turns ROOM Lights OFF or full ON.

4.6.1.4. Room Light Down Switch

- Decreases the intensity of ALL room light(s).

4.6.1.5. Room Light Up Switch

- Increases the intensity of ALL room light(s).

4.6.1.6. Lamp Switch (LAMP)

- Turns the Overhead Lamp ON and OFF.
- Turns the lamp ON at 50% intensity when the switch is pressed for the first time after the system's power cord is plugged into the wall. Afterwards, the light will turn ON at its previous intensity level.
- Turns the LAMP LED ON when power is applied to the Overhead Lamp.

4.6.1.7. Lamp Down Switch

- Decreases the intensity of the Overhead Lamp.

4.6.1.8. Lamp Up Switch

- Increases the intensity of the Overhead Lamp.

Switch on lamp must be on. Lamp will sound when it reaches its maximum and minimum intensity.

4.6.1.9. Binding Post Switch (B/P)

- The B/P Switch is enabled when Switch 4 of Switchpack SW2 is turned OFF. See Table 1. The B/P will sound when it reaches its maximum and minimum intensity.
- When enabled, turns power to the binding Posts (Indirect Ophthalmoscope) ON and OFF.
- Turns the B/P LED ON when power is applied to the Ophthalmoscope.
- When disabled, the B/P Switch has no function. Power to the Ophthalmoscope is controlled by the optional Indirect Hanger Assembly.

4.6.1.10. B/P Down Switch

- Decreases the intensity of the Indirect Ophthalmoscope.

4.6.1.11. B/P Up Switch

- Increases the intensity of the Indirect Ophthalmoscope.

4.6.1.12. Chair Base Up Switch

- Causes the Chair Base to raise.

4.6.1.13. Chair Base Down Switch

- Causes the Chair Base to lower.

4.6.1.14. Auto Switch

- On a low voltage 980, 7000, 710, or FX-920 Chair, this switch causes the Chair Base to lower to its lowest position and the Chair Top to move to its full upright position.
- On a low voltage 520 or 6200 Chair, this switch causes the Chair Base to lower to its lowest position.



CAUTION: THE CHAIR WILL CONTINUE TO MOVE AFTER THIS SWITCH IS RELEASED. TO STOP CHAIR MOVEMENT, PRESS THIS SWITCH A SECOND TIME OR PRESS THE STOP SWITCH LOCATED ON THE SIDE OF THE CHAIR BACK.



PRÉCAUTION: LA CHAISE CONTINUE DE SE DÉPLACER APRÈS QUE CET INTERRUPTEUR EST RELÂCHÉ. POUR ARRÊTER LE MOUVEMENT DE LA CHAISE, APPUYEZ SUR CET INTERRUPTEUR UNE DEUXIÈME FOIS OU APPUYEZ SUR L'INTERRUPTEUR STOP (ARRÊT) SITUÉ SUR LE CÔTÉ DU DOSSIER DE LA CHAISE.

- See Switch 2 on Switchpack SW1.

Well #2

- Controls room light(s) when the rechargeable instrument is removed from the well.
- When the instrument is returned to the well, the room lights return to Scene #1. See section 4.8.3 for Programming Instructions.
- See Switch 3 on Switchpack SW1.

Well #3

- Controls room light(s) when the rechargeable instrument is removed from the well.
- When the instrument is returned to the well, the room lights return to Scene #1. See section 4.8.3 for Programming Instructions.
- See Switch 4 on Switchpack SW1.

Hanger Switch

- Affects the room lights and is programmable.
- See Switch 4 on Switchpack SW2 in Section 2.4, Configuring the System of this manual for details.
- See section 4.8.3 for Programming Instructions.

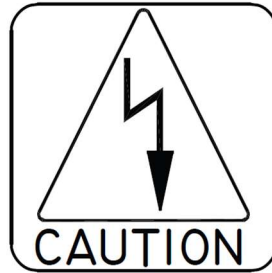
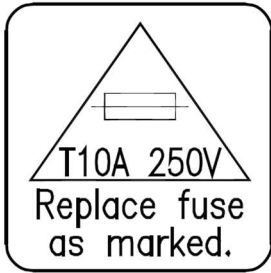
Slit Lamp Arm Switch

- Affects the room lights and is programmable.
- See section 4.8.3 for Programming Instructions.
- See Switch 6 on Switchpack SW1 in the Programming Instructions Section of this manual for details.
- Push button at the beginning of Slit Lamp examination, then push button again after examination is complete.

Well #1

- Controls room light(s) when the rechargeable instrument is removed from well.
- When the instrument is returned to the well, the room lights return to Scene #1. See section 4.8.3 for Programming Instructions.

4.7. Fuses



WARNING: DISCONNECT EQUIPMENT FROM MAIN INPUT POWER BEFORE PROCEEDING WITH ELECTRICAL INSPECTIONS OR MAINTENANCE.



AVERTISSEMENT: DÉCONNECTEZ L'ÉQUIPEMENT DE L'ALIMENTATION ÉLECTRIQUE PRINCIPALE AVANT DE PROCÉDER À DES INSPECTIONS ÉLECTRIQUES OU À DE L'ENTRETIEN.



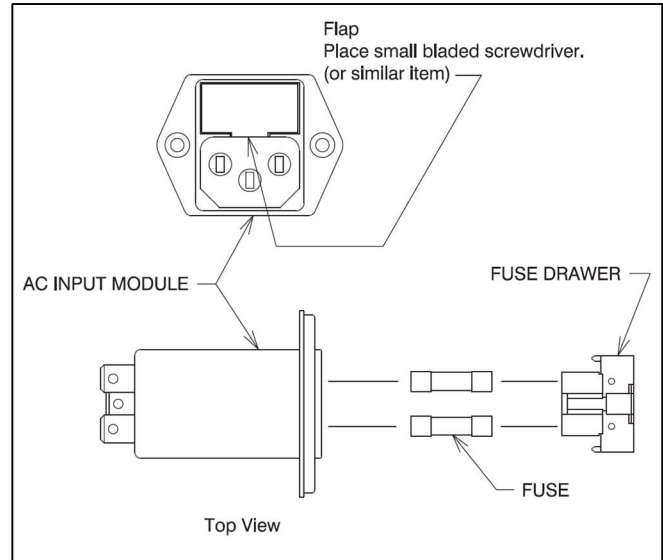
CAUTION: REPLACE FUSE(S) AS MARKED. ALL FUSES MUST BE REPLACED WITH A FUSE OF THE SAME SIZE AND RATING. REFER TO THE WIRE DIAGRAMS AT THE END OF THIS MANUAL.



PRÉCAUTION: REMPLACEZ LE(S) FUSIBLE(S) COMME INDIQUÉ. TOUS LES FUSIBLES DOIVENT ÊTRE REMPLACÉS PAR UN FUSIBLE DE LA MÊME DIMENSION ET DE LA MÊME VALEUR. SE RÉFÉRER AUX SCHÉMAS DE CÂBLAGE À LA FIN DE CE MANUEL.

4.7.1. Floor Units contain two fuses located inside the AC Input Module on the Outlet Plate Assembly.

4.7.2. Console and Base Cap contain no additional fuses.



**FIGURE 17
AC INPUT MODULE**

Method for Removing Fuse Drawer Replacing Fuses:

1. The Fuse Drawer is located above the power cord. See Figure 17 (AC input Module).
2. Remove the Power Cord.
3. Place a small Flathead screwdriver behind flap and pry out. The Fuse Drawer will come forward slightly.
4. Remove and examine the fuses. Replace as necessary.



CAUTION: TO AVOID A BIND OF THE FUSE DRAWER WITHIN THE AC INPUT MODULE, NEVER INSTALL THE FUSE DRAWER INTO THE AC INPUT MODULE WITHOUT FUSES.



PRÉCAUTION: POUR ÉVITER QUE LE TIROIR À FUSIBLE RESTE BLOQUÉ DANS LE MODULE D'ENTRÉE CA, N'INSTALLEZ JAMAIS LE TIROIR À FUSIBLE À L'INTÉRIEUR DU MODULE D'ENTRÉE CA SANS FUSIBLES.

4.8. Eclipse® Infrared (IR) Three Zone Room Light Control System

The Eclipse® IR Room Light Control System (Eclipse® System) is an option on the Instrument Stand and is available with a Console or Base Cap. The Eclipse® System allows you to control the exam room’s incandescent and/or fluorescent lights, and some LED lighting, directly from the Instrument Stand. In most cases, the Instrument Stand changes room lights “automatically” and to the intensity you have chosen for the exam you are about to perform.

The Eclipse® System adds two major components to your Instrument Stand: an IR Transmitter and an IR Receiver. The IR Transmitter snaps onto the top of the Instrument Stand’s Support Pole. It sends IR signals to the IR Receiver, just like how your TV’s Remote Control Unit sends IR signals to your TV. The IR Transmitter should be pointed at the IR Receiver.

The IR Receiver mounts inside the exam room on the wall. Refer to the IR Receiver in Figure 18.



**FIGURE 18
IR RECEIVER**

4.8.1. Three Zone System

4.8.1.1. A Zone refers to a bank of lights controlled by one room light switch. For example a room with a group of canned lights controlled by one switch and fluorescent controlled by another switch has two lighting zones.

- Each zone has a dedicated raise and lower button to adjust the zone.
- Each zone has a dedicated 7-LED bar graph for level status. Percentage of light level and energy saved is displayed on the info screen.
- All zone information has blue backlit LEDs. Backlight turns off when idle for 30 seconds.

4.8.2. Scenes

4.8.2.1. A Scene simply refers to the intensity of the room lights that has been pre-programmed into the Single or Dual-Zone IR Receiver. When the IR Transmitter sends a signal to the IR Receiver, that signal tells the IR Receiver which Scene to adjust the room lights to. Go to http://www.lutron.com/TechnicalDocumentLibrary/Q_SGRJ-xP_QSGR-xP_English_Install.pdf for Installation and Operation Instructions.

4.8.3. Configuring the Instrument Stand to Automatically Control Room Lights

When the user wants to turn on some function of the Instrument Stand, for example, turn the Slit Lamp or AUX1 Switch On, remove the Indirect Ophthalmoscope from the Hanger, or remove a battery-operated Instrument from a Charging Well, they typically intend to perform a specific examination upon the patient. The Eclipse® System allows the user to program the room lights to an intensity level that is suitable for that examination. When the Eclipse® System is used with a Console, the user can individually select which of the eight functions will control room lights by setting switches located on the circuit board. On the Base Cap, only two switches control room lights. These switches always send IR signals to the IR Receiver and this functionality cannot be disabled by switches on the circuit board.



CAUTION: LI-ION BATTERY HANDLES WILL CAUSE UNINTENDED OPERATION OF THE ROOM LIGHTS WHEN ROOM LIGHTS ARE CONTROLLED BY THE ECLIPSE® ROOM LIGHT CONTROL SYSTEM. CONTACT TECHNICAL SERVICE FOR FURTHER ASSISTANCE.



PRÉCAUTION: LES MANETTES DE BATTERIE LITHIUM ION CAUSERONT UN FONCTIONNEMENT NON DÉSIRÉ DE L’ÉCLAIRAGE DE LA PIÈCE LORSQUE CELUI-CI EST COMMANDÉ PAR LE SYSTÈME DE COMMANDE D’ÉCLAIRAGE DE PIÈCE ECLIPSE®. CONTACTEZ LE SERVICE TECHNIQUE POUR UNE ASSISTANCE SUPPLÉMENTAIRE.

4.8.3.1. Console: Configuring Dip Switches on the Circuit Board (Switchpack SW1)

- To avoid any chance of an electrical shock, disconnect the Instrument Stand's power cord from the wall outlet.
- Review Figure 19. If you want one of the listed switches to automatically control room lights during an exam, turn the corresponding switch On. Otherwise, turn the switch Off. The Factory Default setting is Off.
- Reconnect the Instrument Stand to power.

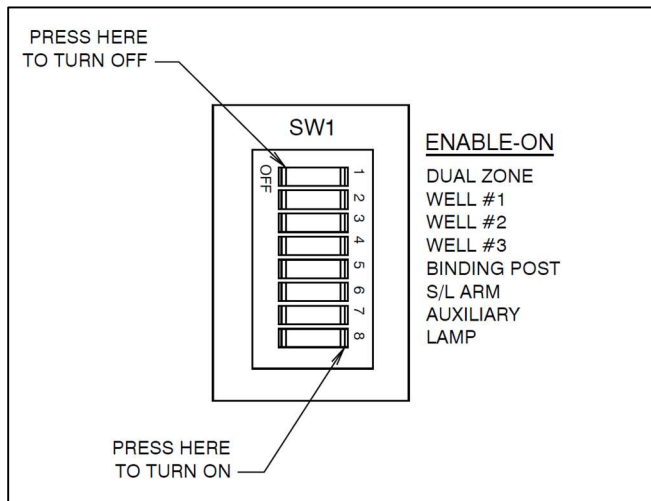


FIGURE 19
SWITCHPACK SW1

Switch 1

- Turn Switch 1 OFF if your system contains a Single-Zone Infrared Receiver.
- Turn Switch 1 ON if your system contains a Three-zone infrared receiver (Factory default setting).

Switch 2

- Turn Switch 2 ON to enable Well #1 to affect room lights.
- Turn Switch 2 OFF to disable Well #1 from affecting room lights.

Switch 3

- Turn Switch 3 ON to enable Well #2 to affect room lights.
- Turn Switch 3 OFF to disable Well #2 from affecting room lights.

Switch 4

- Turn Switch 4 ON to enable Well #3 to affect room lights.
- Turn Switch 4 OFF to disable Well #3 from affecting room lights.

Switch 5

- If power to the Indirect Ophthalmoscope is controlled by the B/P Switch on the front panel, turn Switch 5 ON if you want the B/P Switch to affect room lights.
- Turn Switch 5 OFF if you do not want the B/P Switch to affect room lights.

Switch 6

- Turn Switch 6 ON to enable Slit Lamp Arm Switch to affect room lights.
- Turn Switch 6 OFF to disable Slit Lamp Arm Switch from affecting room lights.

Switch 7

- Turn Switch 7 ON to enable the AUX1 Switch to affect room lights.
- Turn Switch 7 OFF to disable the AUX1 Switch from affecting room lights.

Switch 8

- Turn Switch 8 ON to enable the LAMP Switch to affect room lights.
- Turn Switch 8 OFF to disable the LAMP Switch from affecting room lights.

4.8.3.2. Base Cap: Configuring the Base Cap Software (The Base Cap Circuit Board does not contain Dip Switches.)

The Base Cap controls just two IR functions:

- The Room Lights Switch on the Slit Lamp Arm.
- The Hanger Switch.

These functions are always enabled and cannot be disabled by Dip Switches or software. However, you still need to configure the Base Cap to communicate with Single or Three-Zone IR Receiver. The Factory Default Setting is the Three-Zone IR Receiver. The following

programming sequence is not required if a Three-Zone IR Receiver has been installed in your examination room.

To configure the Base Cap:

- Turn Off the Overhead Lamp.
- Press and hold the Overhead Lamp Up Switch for five (5) seconds.
- If a short 0.2-second beep is heard, the Base Cap has been configured for a Single-Zone IR Receiver.
- If a 1-second beep is heard, the Base Cap has been configured for a Three-Zone IR Receiver.
- Simply press and hold the Lamp Up Switch for five (5) seconds to toggle between the Single or Three-Zone IR Receiver.

NOTE: When using a Base Cap, only these two switches control room lights. These switches always send IR signals to the IR Receiver and this functionality cannot be disabled.

REMARQUE: Lorsqu'un couvercle est utilisé, seulement ces deux interrupteurs contrôlent l'éclairage de la pièce. Ces interrupteurs envoient des signaux IR au récepteur IR et cette fonctionnalité ne peut pas être désactivée.

4.8.3.3. Entering and Exiting Programming Mode

After your IR Receiver has been installed, only a few steps are required to enable your Instrument Stand to control room lights. In this example, let's assume you want to dim the room lights when performing an examination using the Slit Lamp. In this case, a switch has been provided on the Slit Lamp Arm for controlling room lights during a Slit Lamp exam.

4.8.3.3.1. Entering Programming Mode

Press and hold the top and bottom scene buttons simultaneously for 3 seconds. The LEDs in the scene buttons will scroll from top to bottom, confirming that you are in programming mode, and the info screen will display the main menu.

4.8.3.3.2. Exiting Programming Mode

Press and hold the top and bottom scene buttons simultaneously for 3 seconds. The info screen will go to Scene 1.

4.8.3.4. Navigating Menus in Programming Mode

4.8.3.4.1. Master Buttons

The Master buttons allow you to move through the menu choices. The current choice is highlighted on the info screen.

4.8.3.4.2. OK Button

The OK button chooses the current highlighted menu choice. This will either take you to the next menu or accept a setting you have selected. When the screen displays a Yes/No question, the OK button is "Yes".

4.8.3.4.3. Timeclock Button

The Timeclock button functions as a "back" button during programming mode. Pressing the Timeclock button takes you back one step in the current menu. Pressing it repeatedly will eventually return you to the main menu, but will not exit programming mode. When the screen displays a Yes/No question, the Timeclock button is "No".

4.8.3.5. Zone Setup

4.8.3.5.1. Assigning Load Types

1. Enter programming mode.
2. Use the Master buttons to highlight "Zone setup" and press the OK button to accept.
3. Use the Master buttons to highlight "Load type". Press the OK button to accept. See "Setting Load Types" table on the next section.
4. Use the zone raise/lower buttons to choose the load type for that zone. See the list on the next page for supported load types. Press the OK button to accept.
5. The info screen will confirm that your load type has been saved.
6. Exit programming mode.

4.8.3.5.2. Assigning Non-Dim Load Types

Zones assigned to non-dim loads have three available configurations:

- LOFO: Last On, First Off.
- FOFO: First On, First Off.
- FOLO: First On, Last Off.
- LOLO: Last On, Last Off.
- 60/40: On at 60%, off at 40%.

In scenes including dim and non-dim load types, if set up as “First” On/Off, non-dim loads will toggle before dim loads; if set up as “Last” On/Off, dim loads will toggle before non-dim loads.

1. Enter programming mode.
2. Use the Master buttons to highlight “Zone setup” and press the OK button to accept.
3. Use the Master buttons to highlight “Non-Dim Load type”. Press the OK button to accept. See “Setting Load Types” table on the next page.
4. Use the zone raise/lower buttons to choose the non-dim load type for that zone. (Zones not programmed as non-dim will be displayed as Unaffected.) Press the OK button to accept.
5. The info screen will confirm that your load type has been saved.
6. Exit programming mode.

4.8.3.6. Scene Setup

4.8.3.6.1. Setting Zone Levels, Fade Rates, and Shade Group Actions

1. Enter programming mode.
2. Use the Master buttons to highlight “Scene setup” and press the OK button to accept.
3. Use the Master buttons to highlight “Levels” to adjust lighting and/ or shade levels. Press the OK button to accept. Use the Master buttons to highlight the scene number of your desired scene. Press the OK button to accept.
4. Set each zone to the desired light level for this scene using the zone raise/lower buttons. The info screen will display the zone and percentage as you adjust it. To set a zone as unaffected, lower the light levels all the way to off, then hold the zone lower button for 3 seconds. The screen will display “---” and the three middle LEDs for the zone will be lit to indicate this zone is unaffected by the scene (the zone will not change when this scene is

initiated). When all zones are at the desired level, press the OK button to accept.

5. Use the Master buttons to set the fade time for this scene. Press the OK button to accept.
6. Note: This step is applicable only if you have shades on your system. If you do not have or do not wish to set shade groups for this scene, press the OK button to skip this step.
Set each shade group to the desired level for this scene. When all shade groups are at the desired level, press the OK button to accept.
7. The info screen will confirm that your scene has been saved.
8. Exit programming mode.

4.8.3.7. Pico Wireless Control Setup

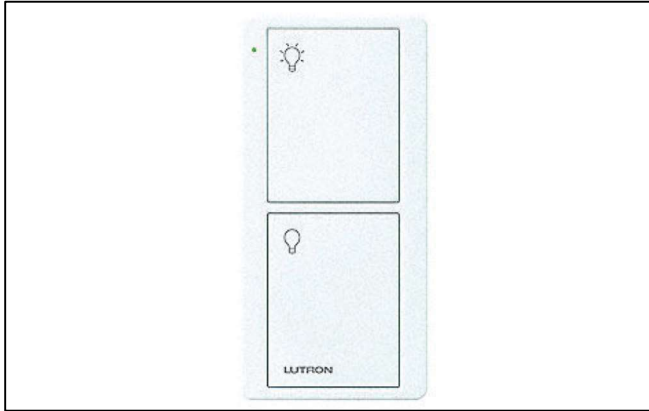


FIGURE 20
PICO WIRELESS CONTROL

1. Make sure the wireless mode of the GRAFIK Eye QS control unit is “Enabled”.
2. On the Pico wireless control, press and hold the top (on) and bottom (off) buttons for 3 seconds. The info screen on the GRAFIK Eye QS control unit will display the Pico wireless control options. Press the OK button on the GRAFIK Eye QS control unit to select the desired operation type for the Pico wireless control.
3. Assign the Pico wireless control:
 - a. To assign the Pico wireless control as a zone controller, use the Master buttons to select “Zone” and press the OK button to accept. Use the zone raise/lower buttons for a zone to select a desired preset level, and then press the zone raise and lower buttons simultaneously for 1 second (until the zone LEDs flash at the programmed preset level). Repeat for all zones you wish to control with the Pico wireless control.
OR
 - b. To assign the Pico wireless control as a scene controller, use the Master buttons to select “Scene” and press the OK button to accept. Press and hold the top scene button on the GRAFIK Eye QS control unit for 3 seconds (until the scene LEDs flash).
4. On the Pico wireless control, press and hold the top and bottom buttons for 3 seconds until the LEDs on the GRAFIK Eye QS control unit stop flashing.

NOTE: The wireless signal has a range of 30 ft (9 m) through standard construction or 60 ft (18 m) line of sight.

REMARQUE: Le signal sans fil a une portée de 9 m (30 Ft) par construction standard ou de 18 m (60 Ft).

NOTE: A Fade Rate can also be programmed for each Scene. This is done at the IR Receiver. Refer to the Installer’s Guide provided with your IR Receiver.

REMARQUE: Un taux de fondu peut aussi être programmé pour chaque Scène. Ceci est effectué au récepteur IR. Se référer au guide de l’installateur fourni avec votre récepteur IR.

4.8.3.8. IR Receiver Installation Instructions

To install your IR Receiver, refer to the Installer’s Guide provided with your IR Receiver. Figures 21-24 are diagrams and instructions copied here for your convenience.

CAUTION: YOUR IR RECEIVER MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. IMPROPER WIRING CAN RESULT IN PERSONAL INJURY OR DAMAGE TO YOUR IR RECEIVER OR OTHER EQUIPMENT.



PRÉCAUTION: VOTRE RÉCEPTEUR IR DOIT ÊTRE INSTALLÉ PAR UN ÉLECTRICIEN QUALIFIÉ CONFORMÉMENT À TOUTES LES RÉGLEMENTATIONS APPLICABLES. UN CÂBLAGE INADÉQUAT PEUT CAUSER UNE BLESSURE OU ENDOMMAGER VOTRE RÉCEPTEUR IR OU D’AUTRE ÉQUIPEMENT.



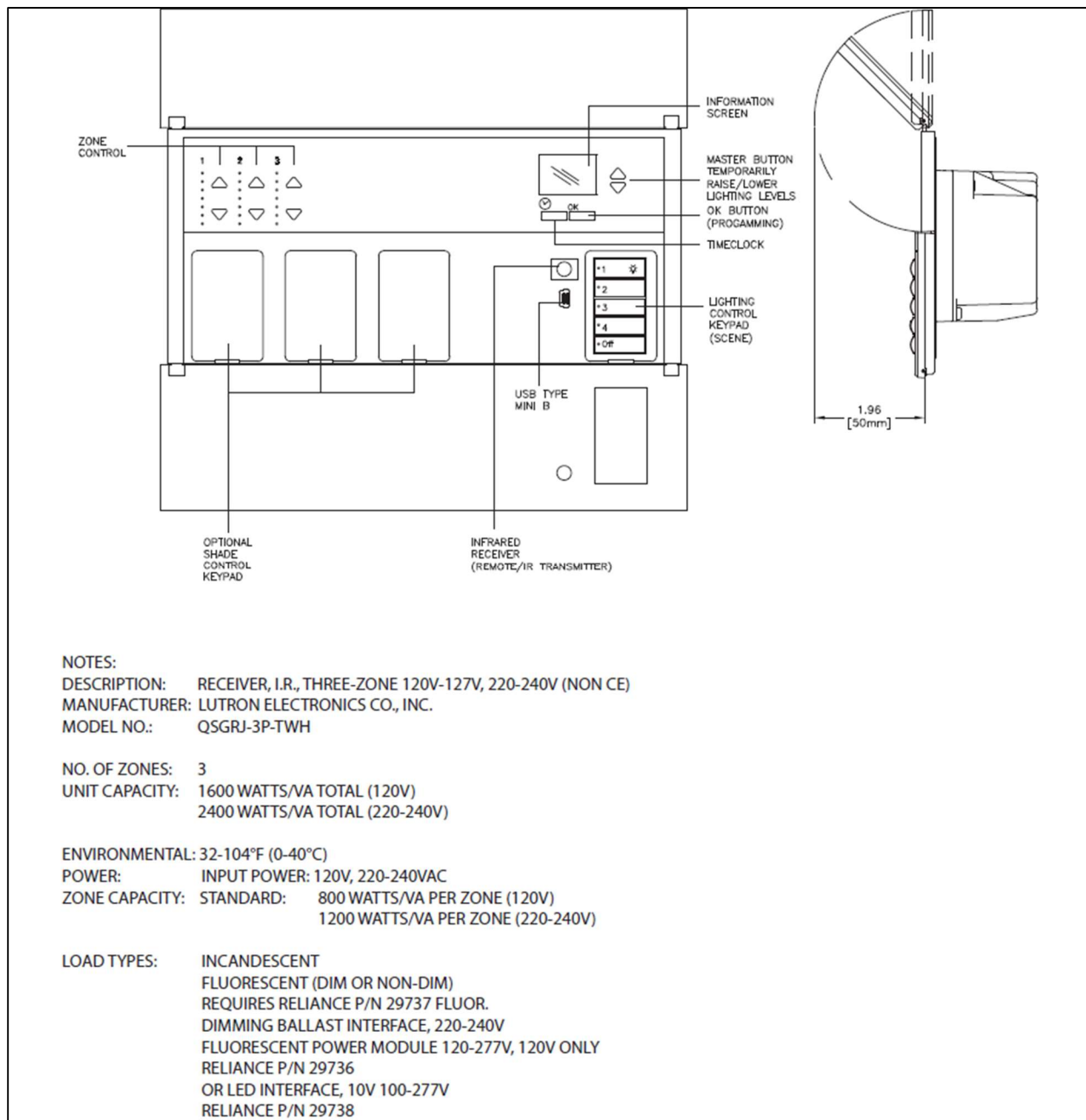


FIGURE 21
THREE-ZONE RECEIVER (P/N 30290)

i **NOTE:** See the Installer's Guide that came with your IR Receiver.

REMARQUE: Consultez le guide de l'installateur fourni avec votre récepteur IR.

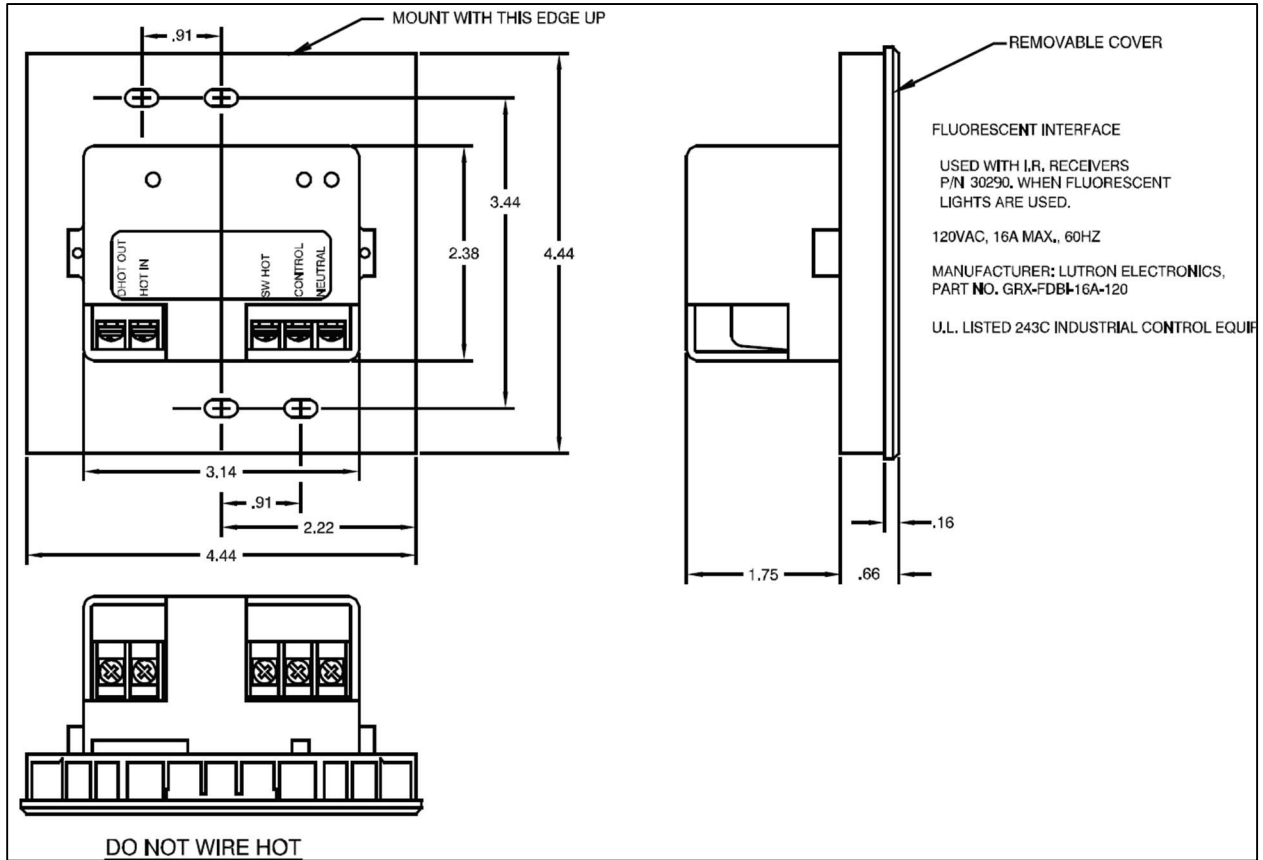


FIGURE 22
FLUORESCENT INTERFACE (P/N 17187)

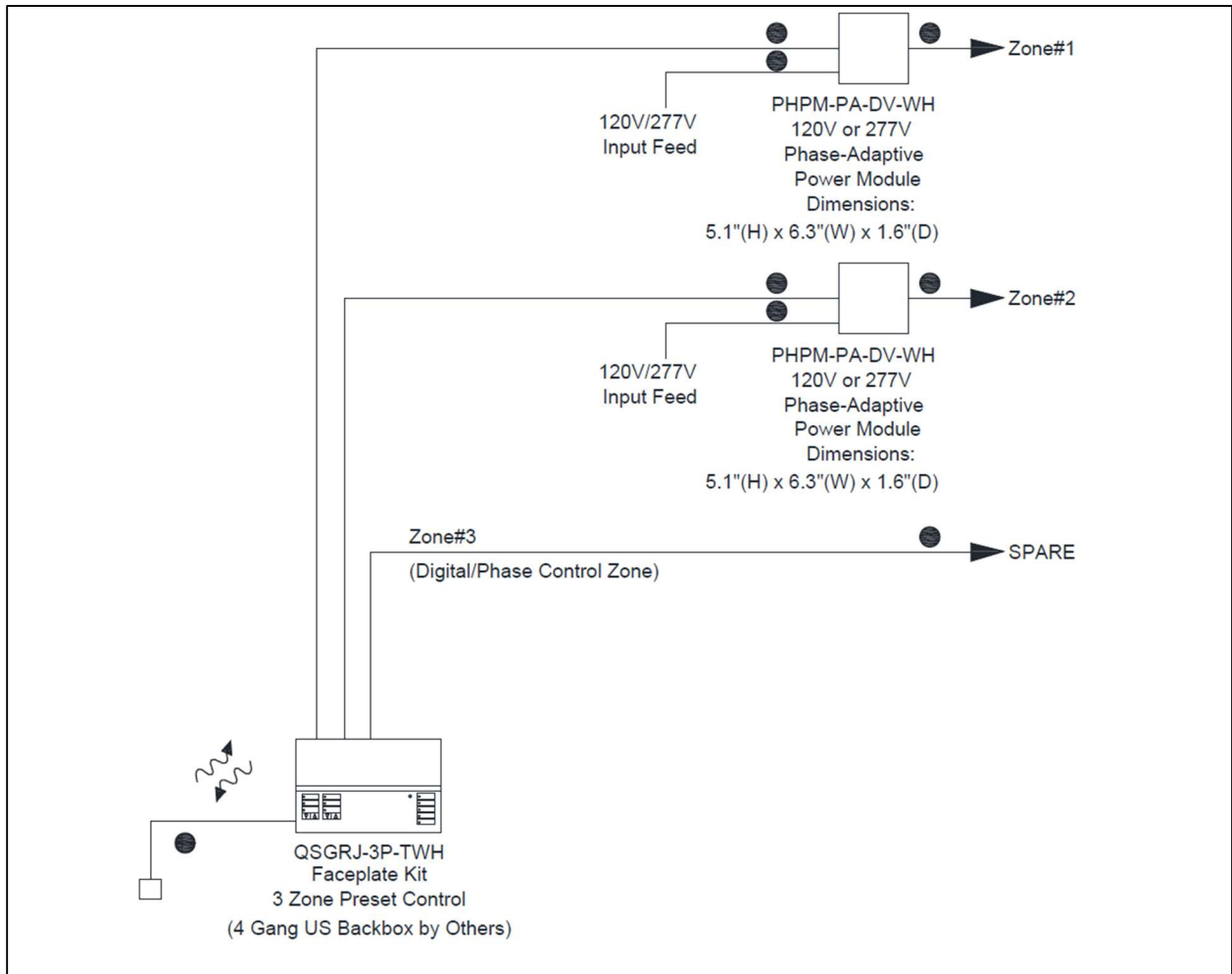


FIGURE 23
INSTALLATION DIAGRAM: THREE-ZONE FLUORESCENT ON/OFF 120 VAC OR 277 VAC

i **NOTE:** See the Installer’s Guide that came with your IR Receiver.

REMARQUE: Consultez le guide de l’installateur fourni avec votre récepteur IR.

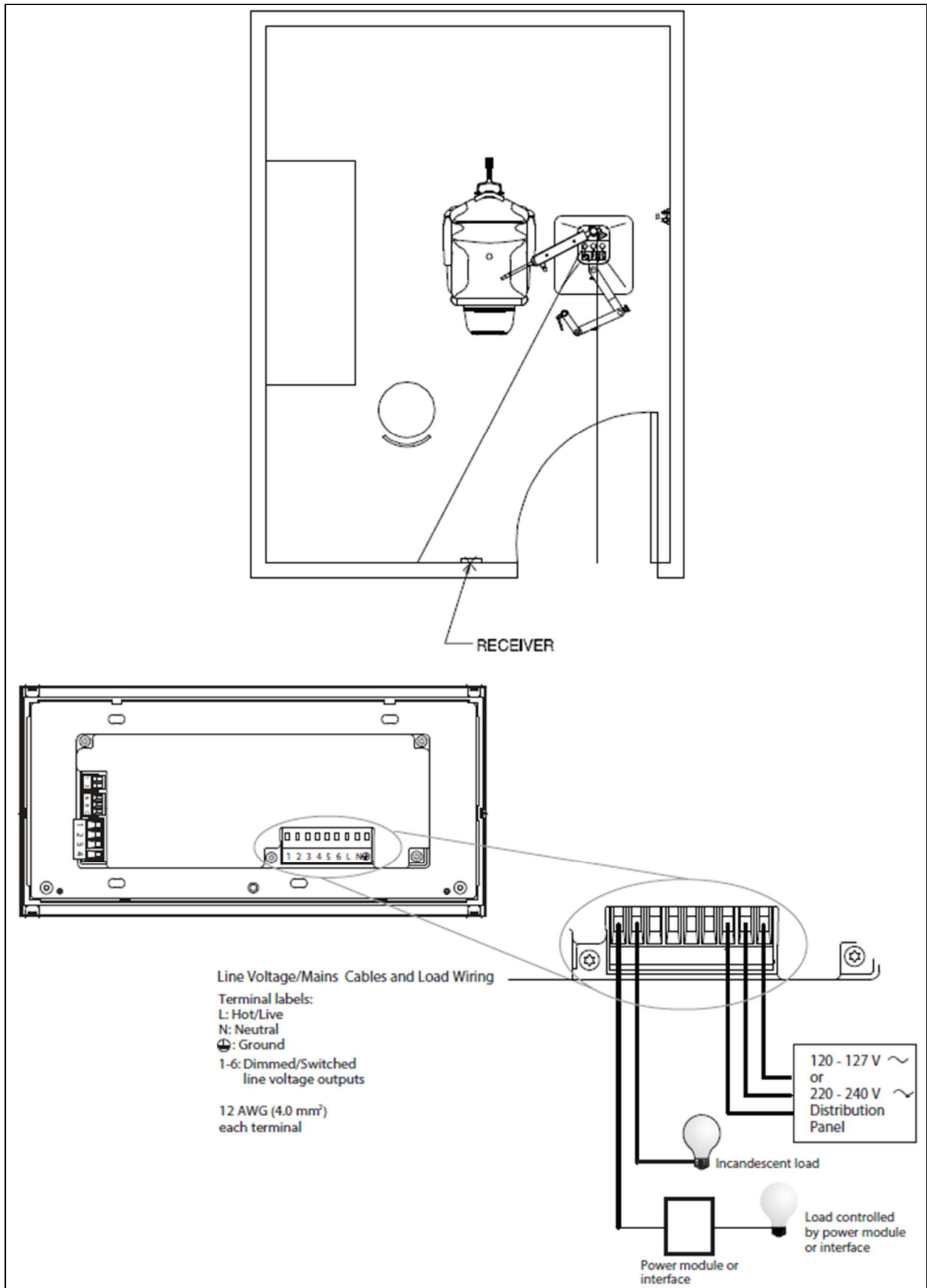


FIGURE 24
INSTALLATION DIAGRAM: THREE-ZONE

TROUBLESHOOTING GUIDE

INSTRUMENT STAND

PROBLEM	PROBLEM CAUSE	SOLUTION
UNIT NOT GETTING POWER.	A) UNIT NOT PLUGGED INTO OUTLET. B) BLOWN FUSE(S). C) BASE CAP OR CONSOLE NOT PLUGGED IN.	A) PLUG POWER CORD INTO WALL. B) REPLACE FUSE(S). C) PLUG BASE CAP OR CONSOLE INTO BASE.
CHAIR CONTROLS NOT FUNCTIONING.	A) CHAIR CONTROL CABLE NOT CONNECTED TO STAND. B) BASE CAP OR CONSOLE NOT CONNECTED TO CONTROL CABLE.	A) CONNECT CHAIR CONTROL CABLE TO STAND. B) CONNECT BASE CAP OR CONSOLE TO CONTROL CABLE ON TOP OF THE STAND.
WELLS NOT RECHARGING.	A) UNIT NOT PLUGGED INTO OUTLET. B) POOR CABLE CONNECTION.	A) PLUG POWER CORD INTO WALL. B) CONNECT CABLE TO WELL PCB.
OVERHEAD LAMP NOT FUNCTIONING.	A) OVERHEAD LAMP NOT PLUGGED INTO "LAMP" OUTLET.	A) PLUG OVERHEAD LAMP INTO "LAMP" OUTLET.
AUXILIARY ARM NOT RECEIVING POWER.	A) AUXILIARY ARM NOT PLUGGED INTO BASE CAP OR CONSOLE.	A) PLUG AUXILIARY ARM INTO BASE CAP OR CONSOLE.

ECLIPSE® ROOM LIGHT CONTROL SYSTEM

PROBLEM	PROBLEM CAUSE	SOLUTION
ROOM LIGHTS NOT RESPONSIVE.	<p>1A) LED IN TRANSMITTER DOES NOT EMIT RED LIGHT.</p> <p>1B) LED IN TRANSMITTER DOES EMIT RED LIGHT.</p>	<p>A) CHECK DIP SWITCHES FOR CORRECT SETTINGS.</p> <p>B) ENSURE THAT TRANSMITTER IS PROPERLY CONNECTED.</p> <p>A) CHECK PROGRAMMING OF RECEIVER.</p> <p>B) CHECK TO ENSURE NO OBJECT IS POSITIONED IN FRONT OF TRANSMITTER OR RECEIVER.</p> <p>C) ENSURE THAT TRANSMITTER IS POINTED IN DIRECTION OF RECEIVER.</p> <p>D) IF RECEIVER IS 5' OR LESS AWAY FROM STAND ADJUST POSITION OF TRANSMITTER SO IT IS DIRECTLY IN LINE WITH THE RECEIVER.</p> <p>E) IF RECEIVER IS MORE THAN 5' AWAY FROM STAND PLACE THE TRANSMITTER AT TOP OF POLE.</p>
SLIT LAMP ARM SWITCH DOES NOT AFFECT ROOM LIGHTS.	A) UNIT NOT IN PROPER SCENE.	A) ACTIVATE SWITCHES ON SLIT LAMP ARM AGAIN.
ROOM LIGHTS DO NOT RESPOND AS DESIRED.	A) RECEIVER NOT PROGRAMMED CORRECTLY.	A) REPROGRAM RECEIVER.
WALL UNIT DOES NOT AFFECT LIGHTS.	<p>A) CHECK WIRING.</p> <p>B) CHECK RECEIVER.</p>	<p>A) CONTACT INSTALLER OF RECEIVER.</p> <p>B) EXCHANGE RECEIVER.</p>

CLEANING AND MAINTENANCE

Cleaning Painted Surfaces

Painted metal surfaces are covered with a durable powder coat paint which is resistant to scratching and scuffing. Painted surfaces may be cleaned with a clean cloth dampened with mild, soapy water or equivalent household spray cleaner.

Recommended Infection Control Products

The following Infection Control Products have been tested on the equipment and will not cause damage to painted surfaces or plastic covers:

- Cavicide® Hospital Disinfectant.
- Precise® Hospital Foam Cleaner Disinfectant.



WARNING: REFER TO LOCAL OR HEALTHCARE PROFESSION GUIDELINES FOR SELECTING EFFECTIVE INFECTION CONTROL PRODUCTS.



AVERTISSEMENT: SE RÉFÉRER AUX DIRECTIVES LOCALES OU DES PROFESSIONS DE LA SANTÉ POUR SÉLECTIONNER DES PRODUITS DE CONTRÔLE D'INFECTION EFFICACES.



CAUTION: FOLLOW MANUFACTURER'S DIRECTIONS FOR CONCENTRATION AND APPLICATION OF DISINFECTING CLEANER. AVOID PROED APPLICATION OF ANY DISINFECTANT/CLEANER PRODUCTS, BECAUSE THEY MAY CAUSE STAINING OR DISCOLORATION OF MATERIAL.



PRÉCAUTION: SUIVEZ LES INSTRUCTIONS DU FABRICANT POUR LA CONCENTRATION ET L'APPLICATION DE NETTOYEURS DÉSINFECTANTS. ÉVITEZ UNE APPLICATION PROÉE DE TOUT PRODUIT DÉSINFECTANT/NETTOYANT, PARCE QUE CEUXCI POURRAIENT CAUSER DES TACHES OU UNE DÉCOLORATION DU MATÉRIEL.



NOTE: Equipment should be cleaned as needed or per local or healthcare profession guidelines.

REMARQUE: L'équipement devrait être nettoyé au besoin ou selon les directives locales ou celles des professions de la santé.



WARNING: TO AVOID BIOLOGICAL HAZARDS WHEN EQUIPMENT HAS REACHED THE END OF ITS USEFUL LIFE, DISPOSE OF EQUIPMENT PER LOCAL REGULATIONS OR HEALTHCARE PROFESSION GUIDELINES.



AVERTISSEMENT: POUR ÉVITER LES RISQUES BIOLOGIQUES LORSQUE L'ÉQUIPEMENT A ATTEINT LA FIN DE SA VIE UTILE, DISPOSEZ DE L'ÉQUIPEMENT SELON LES RÉGLEMENTATIONS LOCALES OU LES DIRECTIVES DES PROFESSIONS DE LA SANTÉ.



NOTE: To ensure a long service life, the device should be cleaned as described. It is also recommend having the device inspected by an authorized service technician annually.

REMARQUE: Pour assurer une longue durée de vie, l'appareil doit être nettoyé comme décrit. Il est également recommandé de faire inspecter l'appareil par un technicien d'entretien autorisé chaque année.

LIMITED WARRANTY

The Reliance® product must be used only for the purposes and in the manner described in the literature distributed with the product. The products are warranted against defective materials and workmanship for a period of one (2) years from date of installation. Products or parts thereof will be repaired or replaced as required at Haag-Streit USA, Inc. Such repair or replacement shall be the sole remedy under this warranty. This warranty extends only to the original purchaser from an authorized Haag-Streit dealer and is subject to the following conditions:

1. The warranty card must be completed and returned to Haag-Streit USA, Inc. within two (2) weeks from the date of installation.
2. Installation and servicing of the products must be performed by trained Haag-Streit USA, Inc. equipment dealer service personnel in accordance with the appropriate instruction manual for the products. Warranty will be voided if installation is performed by a non-authorized individual.
3. The products have not sustained breakage or other types of damage due to accident or misuse.
4. This warranty will not apply to Reliance® products which have had the serial number removed, altered or effaced.

EXCEPT FOR THE EXPRESS WARRANTY SET FORTH ABOVE, HAAG-STREIT DOES NOT GRANT ANY WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE.

Haag-Streit USA, Inc. neither assumes nor authorizes any person to assume for it, any other liability in connection with the sale and use of its products.

REMEDIES ARE LIMITED EXCLUSIVELY TO REPAIR OR REPLACEMENT OF PARTS. HAAG-STREIT USA, INC. EXPRESSLY DISCLAIMS LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGE RESULTING FROM THE USE OF THE EQUIPMENT.

Claims covered by this warranty will be honored when presented within one (1) month from discovery of a defect.



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