



Manufactured by KBD, Inc.

## D/UV-F OWNER'S MANUAL

For proper usage, please read your Owner's Manual. Always wear protective eyewear before starting your exposures.

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**The information provided in this booklet is for educational purposes only. The information is not medical advice and is not a substitute for medical care or professional legal advice. A medical practitioner or other expert should be consulted prior to any significant change in diet, sun exposure, exercise or any other lifestyle change. There shall be neither liability nor responsibility should the information provided in this booklet be used in any manner other than for the purposes of education.**

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## KBD D/UV-F LAMP

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The D/UV-F lamp is intended for individuals who may not be able to receive either needed sunlight exposures, tolerate or process Vitamin D supplements. It is not intended to substitute for a rich Vitamin D diet.

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### CAUTION

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Protect your eyes; wear protective eyewear. To avoid injury to eyes, protective eyewear (KBD, Inc. Cat. No. 31050A) must be worn by all persons in room during lamp operation. Read the instruction booklet before use.

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### DANGER

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Ultraviolet Radiation, follow instructions, avoid overexposure. As with natural sunlight, overexposure can cause skin injury and allergic reactions. Repeated exposure may cause premature aging of the skin and skin cancer. Wear protective eyewear, failure to do so may result in severe burns or long-term injury to the eyes. Medications or cosmetics may increase/decrease your sensitivity to ultraviolet radiation. Consult physician before using any UV lamp if you are using medications or have a history of skin problems or believe yourself sensitive to sunlight.

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### RECOMMENDED EXPOSURE SCHEDULE

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Natural production of Vitamin D in the human body requires less exposure to ultraviolet rays than tanning or sun burning. To reduce the chance of unintended overexposure from this appliance and its ultra-violet rays, determine your skin type then follow the exposure schedule below.

SKIN TYPE	SKIN COLOR	AFTER SUN EXPOSURE
I	Pale white	Always burns - never tans
II	White to light beige	Burns easily - tans minimally
III	Beige	Burns moderately – tans gradually to light brown
IV	Light brown	Burns minimally - tans well to moderately brown
V	Moderate brown	Rarely burns - tans profusely to dark brown
VI	Dark brown or black	Never burns – tans profusely

**Skin Type 1, highly sun sensitive people (those who always burn & never tan), should not use this ultraviolet device.**



**ALWAYS WEAR THE PROTECTIVE EYEWEAR SUPPLIED WITH THE VITAMIN D LAMP. IT IS MANDATORY TO WEAR THE EYEWEAR BEFORE STARTING THE UNIT.**

**EXPOSURE SCHEDULE:**  
(Appliance warm up is not required)

### **WEEK ONE**

Exposure distance is 15 inches from wire guard to body surface (no closer) for a maximum of 3 minutes every other day. Expose different parts of the body alternating front and back areas. If redness occurs, stop using the unit until ALL redness disappears, usually 24-48 hours. Confirm recommended time and distance. Restart the initial exposure schedule. If redness returns after resuming exposures, skin may be too sensitive to use this ultraviolet device.

### **WEEK TWO**

Using the same distance (15 inches), increase exposure time to a maximum of 4 minutes every other day. Alternate exposing front and back parts of the body. If redness occurs, stop using the unit until ALL redness disappears. Then resume exposure 15 inches (no closer) for one week (as stated in Week One above) for a maximum of 3 minutes every other day. Move to WEEK TWO schedule when skin allows with no further redness.

### **WEEK THREE**

Using the same distance (15 inches), increase exposure time to a maximum of 5 minutes every other day. Alternate exposing front and back parts of the body. If redness occurs, stop using the unit until ALL redness disappears. Then resume exposure at 15 inches (no closer) for one week (as stated in WEEK TWO) for a maximum of 4 minutes every other day. Move to WEEK THREE schedule when skin allows with no further redness. Continue with WEEK THREE schedule to improve Vitamin D levels.

The above schedule is recommended to acclimatize the skin to the ultraviolet rays without erythema (redness).



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## OPERATING INSTRUCTIONS FOR YOUR KBD-D/UV-F LAMP

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- Wear protective eyewear provided with unit
- Place unit 15" (inches) from skin
- Plug unit into 120 volt - 240 volt (50Hz/60Hz) power source
- Turn power switch to "ON" position
- Set timer to 5 minutes
- Unplug lamp for storage and service

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### HOW MUCH VITAMIN D WILL I MAKE

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The ultraviolet spectrum of the D/UV-F lamp has been measured and compared with the Vitamin D action spectrum yielding a Vitamin D effective irradiance which confirms that the Vitamin D production process will result from exposure to the D/UV-F. It is impossible to say exactly how much Vitamin D because an individual's ability for Vitamin D production in the skin by exposure to natural or artificial ultraviolet energy varies greatly. Contributing factors include the location and amount of skin exposed, dietary habits, percent of body fat and more. Outdoors in sunlight geography, time of day and time of year, also contribute to the variations. Scientific literature indicates exposing 10% of the body to ultraviolet B can generate 1000-2000 IU's of Vitamin D per day. The literature also shows 1000 IU of Vitamin D per day synthesizes approximately 10 ng/mL. Published recommendations indicate that 40-60 ng/mL to be the optimal level of Vitamin D.

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### KBD, INC. HISTOLOGY

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In the 1930's our Vitamin D ultraviolet source was introduced for sale and use in the home. With the recent realization that even with dietary supplementation many people do not get enough solar UV exposure to maintain sufficient Vitamin D levels, we incorporated a timer for safety and in 2006 we re-introduced our classic D/UV model. The original Sperti Sunlamp consisted of a filtered intermediate pressure mercury lamp, approved by the AMA in 1940 as a sunlamp, with a label claim noting that Vitamin D would occur due to exposure. Today's KBD Vitamin D lamp is an updated version utilizing fluorescent technology, specifically formulated to produce Ultraviolet energy in the specific Vitamin D producing range and eliminating any harmful UVC energy. In order to comply with modern safety guidance, the five (5) minute timer provides an exposure, at 15 inches from the user's skin, of 1 Standard Erythemal Dose (SED). The SED, is an internationally standardized measure of UV radiation equivalency.



## — FACTS ABOUT VITAMIN D AND ULTRAVIOLET EXPOSURE —

- Vitamin D is perhaps the single most underrated nutrient in the world of nutrition.
- Vitamin D is produced by your skin in response to exposure to ultraviolet radiation.
- UVB rays of ultraviolet light generate Vitamin D in your skin but cannot penetrate glass, so you don't generate Vitamin D when sitting in your car or home.
- It is nearly impossible to get adequate amounts of Vitamin D from your diet. Ultraviolet exposure is the only reliable way to generate Vitamin D in your body.
- You would need to drink ten tall glasses of Vitamin D fortified milk each day to get minimum levels of Vitamin D into your diet.
- People with dark skin pigmentation may need 6-10 times as much exposure as fair skinned people to generate the same amount of Vitamin D.
- Sufficient levels of Vitamin D are crucial for calcium absorption in your intestines. Without sufficient Vitamin D, your body cannot absorb calcium.
- Chronic Vitamin D deficiency cannot be reversed overnight. It takes months of supplementation and exposure to replenish your Vitamin D supply.
- Sunscreens block your body's ability to generate Vitamin D by ~95%.
- It is impossible to generate too much Vitamin D from ultraviolet exposure. Your body will self-regulate and only produce what is needed.
- Vitamin D is "activated" in your body by your kidneys and liver.



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## AN INTRODUCTION TO VITAMIN D

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Vitamin D is essential for the development and maintenance of healthy bones. Early in life Vitamin D is necessary for bone development and growth. Later in life Vitamin D is necessary for bone maintenance. Vitamin D is normally made in our skin or ingested in the foods we eat. In our skin Vitamin D is made by the photoconversion of 7-Dehydrocholesterol (a provitamin) to Previtamin D3. Previtamin D3 undergoes thermal isomerization to Vitamin D3 which is picked up by serum proteins and carried first to the liver where it undergoes a hydroxylation to 25-hydroxy Vitamin D and then 25-Hydroxy Vitamin D is carried to the kidneys where a second hydroxylation occurs which makes the active form of the vitamin 1,25 calciferol.

When we ingest foods containing Vitamin D3, like certain fish oils, or milks or cereals fortified with Vitamin D3, the D3 is transported through the gut and carried by proteins for the necessary hydroxylations by the liver and kidneys. There are several disturbing reports that some foods purported to contain Vitamin D, in fact, do not.

Vitamin D is stored in the body fat and the major circulating form of Vitamin D, 25 (OH)D has a circulating half life of approximately 2-3 weeks. Both of these in combination can help maintain a person's Vitamin D status in the normal range throughout the winter if they obtain enough Vitamin D during the spring, summer and fall from sun exposure. However, it should be appreciated that body fat can sequester Vitamin D, and has been shown that obese people are more prone to Vitamin D deficiency because of the irreversible sequestration of Vitamin D in the body fat. It also should be recognized that you would need to raise your blood levels of 25 (OH)D into the 100-150 nmol/L (40-60 ng/ml) range by the end of the summer in order to store enough Vitamin D in your body fat and have enough 25 (OH)D in the circulation to sustain you throughout the winter. Since most children and adults never reach this blood level, it is necessary for them to increase their dietary intake of Vitamin D and to take a vitamin D supplement throughout the winter to maintain their 25 (OH)D levels above 75/nmol/L which most experts agree is a healthy preferred level.

It is well documented that increase in sensible sun exposure and or Vitamin D intake improves overall health and well being. Exposure to ultraviolet B radiation or increasing intake of Vitamin D maximizes bone health in children; helps prevent osteoporosis in adults; decreases risk of common autoimmune diseases including multiple sclerosis, rheumatoid arthritis, Crohn's disease and type 1 diabetes; reduces risk of serious deadly cancers including cancers of the colon, breast, prostate, ovary, esophagus and others; and decreases risk of cardiovascular heart



disease. In addition, it is well documented that exposure to solar ultraviolet radiation was an effective method of treating patients with tuberculosis. Recent revelations have documented that it is necessary to increase blood levels of Vitamin D either from solar ultraviolet irradiation, artificial ultraviolet irradiation or increasing Vitamin D intake for enhancing the immune system to destroy the bacterium that causes tuberculosis. Thus, sensible exposure to ultraviolet B radiation from sun or lamps is an effective method of maintaining adequate vitamin D levels to sustain health throughout life.

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## TUBE REPLACEMENT

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Tools Required:

Phillips Head Screwdriver

Step 1.

Position unit upright

Step 2.

Remove wire guard by compressing either side away from the metal housing

Step 3.

Remove the top front screw from both sides of unit. Remove the only screw on top of unit.

Step 4.

Remove top panel.

Step 5.

Rotate each bulb 1/4 turn either direction. Gently pull top of tube toward you. Lift tube out of base connector. Remove all tubes in this manner.

Step 6.

Align bottom pins of replacement tube front to back and insert into bottom lamp holder. Seat top set of pins by pushing into top lamp holder.

Step 7.

Rotate each tube 1/4 turn making sure the label/etching is facing you. You will notice the 'lighter' part of the tube is in the back.

Step 8.

Replace top panel and wire guard.

After all tubes are replaced, your D/UV-F lamp can be restarted.



**LIMITED WARRANTY KBD D/UV-F LIGHT  
PROOF OF PURCHASE REQUIRED FOR ALL WARRANTY WORK**

**WHAT IS COVERED** \_\_\_\_\_

All parts defective in materials or quality of workmanship.

**FOR HOW LONG** \_\_\_\_\_

Three (3) months from date of purchase.

**WHAT WE WILL DO** \_\_\_\_\_

We will decide either to replace or repair free of charge any defective part.

**WHAT WE WILL NOT DO** \_\_\_\_\_

Pay shipping or transportation costs.

**WHAT YOU MUST DO** \_\_\_\_\_

The warranty registration card must be completed within ten (10) days of the date of purchase. The completion and return of the warranty registration card to KBD, Inc.; 2550 American Court; Crescent Springs, KY 41017 within ten (10) days of purchase of this product is a condition of warranty coverage.

**HOW TO GET WARRANTY SERVICES** \_\_\_\_\_

For service, defective unit or defective part must be returned to the Factory Service Department; KBD, Inc., 2550 American Court, Crescent Springs, KY 41017.

**OTHER CONDITIONS** \_\_\_\_\_

This warranty covers the first purchaser only. This warranty does not cover commercial use. This warranty shall only apply to D/UV-F Lamps that have not been tampered with or altered in any way or subjected to misuse, neglect, or accident.

**STATE LAW RIGHTS** \_\_\_\_\_

Implied warranties are limited to the duration of three (3) months. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

**ALL KBD PRODUCTS ARE LISTED**

**ABUSE OR MISUSE WILL VOID WARRANTY**