

# StarDental® Instruments

## StarBright Lamp Control System and Handpiece Tubing

### Instruction Manual

Caution: Federal law restricts this device to sale by or on the order of a dentist.

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**BEFORE OPERATING THE LAMP CONTROL, CAREFULLY READ AND FOLLOW ALL OF THESE INSTRUCTIONS. SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE AND OBSERVE ALL WARNINGS AND CAUTIONS.**

### Indications For Use

The lamp control is used with any of a variety of dental air driven handpieces which have fiber optic capability in order to illuminate the work area

**NOTICE** Any serious incident occurring from the use of this device should be reported to StarDental immediately. If incident occurred in a EU Member State the Competent Authority must be notified.

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### Specifications

#### AC Adaptor

Height x Width x Length: Approximately: 2" x 1.85" x 3.25"  
Voltage Input Range: 100V-240VAC  
Power Output: 20 watts  
2.2 amp current  
9 VDC

#### StarBright Fiber Optic Controller

StarDental Part Number: 265677 Single Position Controller  
265676 Dual Position Controller

Height x Width x Length: 0.92" x 1.0" x 3.0"  
Weight: 1.5oz (113.8 g)  
Voltage Input: 7.5-9V AC/DC, 1.2A  
Air Pressure Input: 100 psi max. 10-15 psi activation  
Voltage Output at Handpiece Terminal: 3.3 VDC  
Calibration Range: 2.5-4.2 VDC  
Automatic Light Delay: 7 seconds  
Lamp, StarBright: Lens end, Xenon-Halogen, StarDental Part #262522  
Voltage: 3.3 VDC  
Wattage: 4.3 watts  
Current: 1.36 amps  
Lamp, non-StarDental: Consult with tubing or handpiece manufacturer to confirm correct voltage setting.

### Product Description

The StarBright Lamp Control System (PN 265677 or 265676), from StarDental is designed to provide power for a handpiece light source. The system may be installed into a dental unit to provide a clean, aesthetic visual appearance. For this reason, it is highly recommended that a qualified service technician be consulted for proper installation of the product.

The StarDental Lamp Control System has a power requirement of 7.5 – 9 V AC/DC, 1.2A. and has an output range of 2.5 – 4.2 VDC. StarDental recommends using AC Adaptor # 265672. It is factory preset to 3.3 VDC to operate with a StarDental Fiber Optic Swivel.

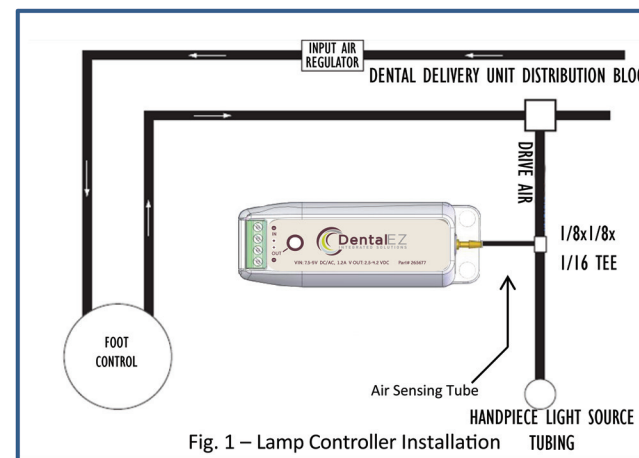
### Lamp Control System Installation

Handpiece light source tubings are available in various styles and colors to be compatible with dental unit colors and desired handpiece connections. If a unit does not already have a handpiece light source tubing, install tubing that is compatible with the particular handpiece being used.

1. Route signal air tubing from the Reducing Tee to the lamp control. Select a position on the drive air tubing near the lamp control for installation. It may be necessary to trim back the outer tube jacket to get correct position of the drive air tube (clear).
2. Cut the drive air tubing and slide a ferrule over each end of the cut tubing.
3. Install the Reducing Tee by sliding each cut tubing onto each barb of the Reducing Tee.
4. Push ferrules over tubing at each barb to lock tubing in place.

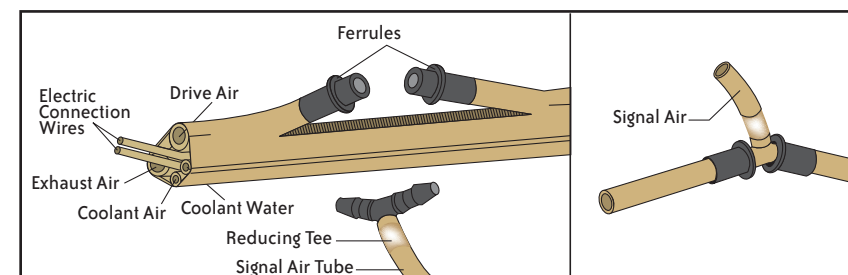
**Note:** Install a 1/8" x 1/8" x 1/16" plastic tee and air sensing tube assembly into the drive-air line of the appropriate handpiece position not more than 12" from the desired location of the Lamp Controller. Signal air tubing must be free of kinks to activate lamp control properly.

See Fig. 1 and Fig. 2

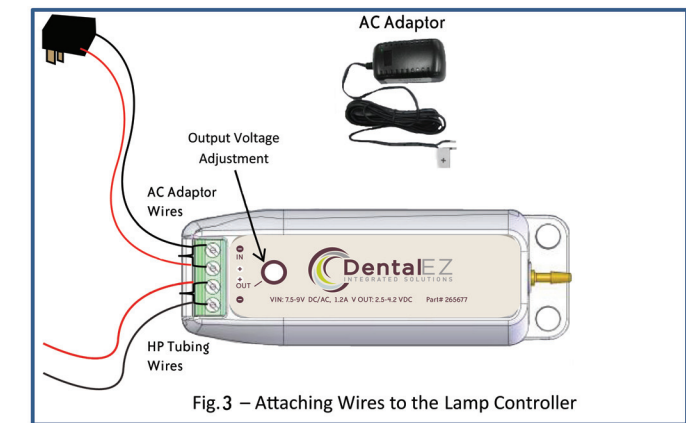


**Note:** Tubing, Ferrules and Tees not included

Fig 2



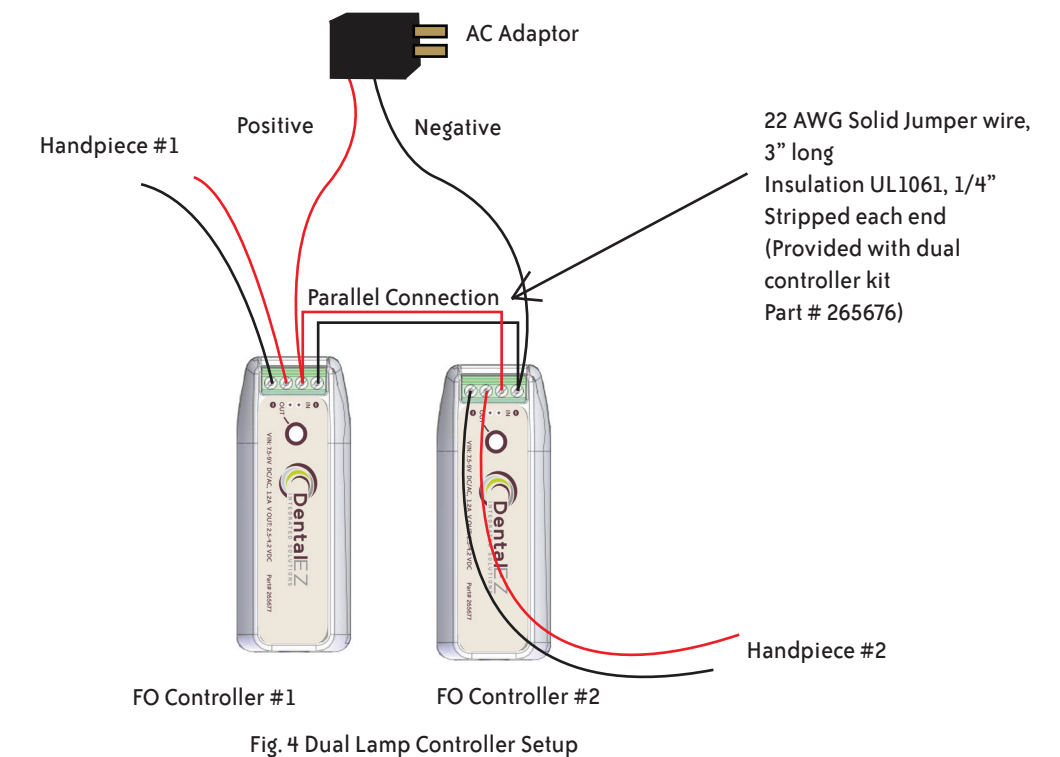
5. Carefully route the power supply cord through or on the support arm of the delivery head for eventual connection to the Lamp Controller. Provide sufficient slack to prevent binding any moving part. Prevent the cord from hanging loosely in an area where personnel travel.
6. Attach wire marked "+" on the AC adaptor to the "+" terminal on the controller. Attach the remaining wire to the "-" terminal.



7. Attach the handpiece tubing wires to the Lamp Controller terminals as shown in Fig. 3.

**Note:** If bare wire is visible, take it out of terminal and trim it down so that the end of the insulation butts up to the electrical terminal, ensuring that no bare wire is visible.

8. To create a dual output fiber optic controller, attach the AC Adaptor wires and the handpiece wires as shown in figure 4. Make sure signal air is applied to both controllers from their respective handpieces.



**NOTICE** Only use a StarDental AC adaptor (Part # 265672). Use of other transformers may cause damage to the controller.

9. Plug AC adaptor into wall outlet.

**Note:** If measuring voltage from the set screw, ensure screws are fully tightened for correct voltage reading.

**Note:** Non-StarDental tubing installation procedure is the same as StarDental tubing installation procedure unless otherwise specified by tubing manufacturer.

## Adjusting Lamp Voltage

**Tools Required:** 5/64" Jeweler's Screwdriver, DMM - Digital Multimeter capable of measuring 2 to 5 volts DC

The operating voltage of the handpieces' lamps must now be set to the value recommended by the manufacturer. The StarDental Fiber Optic handpiece and StarBright® swivel lamp = 3.3VDC. The voltage adjustment control is located near the terminal strip of the Lamp Control unit and is turned using a 5/64" jeweler's screwdriver.

1. Connect the handpiece to applicable tubing adapter - follow the manufacturer's instructions. Plug switching power supply into a convenient receptacle.

**CAUTION** Voltage set levels seriously affect the operation of the lamp, especially longevity. Never use these controls to adjust lamp intensity.

2. Turn all the voltage setting controls fully down (CCW). Gain access to the lamp connections and attach the digital multimeter (DMM). Activate the handpiece line, which should turn on the lamp for seven seconds. Slowly turn the appropriate voltage set control up (CW) until the meter reads 3.3VDC (if not StarBright swivel lamp, then use the manufacturer's recommended voltage).

- If direct attachment of DMM to the lamp is mechanically difficult, then attach the DMM directly to the appropriate set screw connections. With the lamp operating, set the recommended voltage. (With this method, if using tubing with smaller wire sizes, a higher voltage may be required to achieve the specified voltage at the lamp)

## Lamp Control Operation

### HANDPIECES:

The Lamp Control is designed to operate a variety of fiber optic handpieces. Once installation and lamp voltage adjustments are completed, the Lamp Control will deliver the correct voltage to each handpiece tubing and lamp.

1. Pick up the handpiece from hanger. To operate the fiber optic electrical system, press and hold down the foot pedal of the delivery unit.

2. After completing the work session, return the handpiece to its holder.

## Cleaning

<b>NOTE:</b>	Clean outside surfaces of tubing with a non-alcohol based disinfectant only. Use of alcohol based cleaner will discolor tubing.
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## Troubleshooting

**Problem:** NO LIGHT OR INTERMITTENT LIGHT

**Cause:** Electrical connections

**Correction:** Verify three connections:

1. Wall outlet – AC Adaptor
2. Power pack – Lamp Control electrical connections
3. Lamp Control – handpiece tubing electrical connections check connections and polarity

**Cause:** Crimped signal air line to lamp control

**Correction:** Straighten signal air line to allow air flow.

**Cause:** Lamp installation

**Correction:** Verify lamp is properly seated into tubing connector.

**Cause:** Corrosion on lamp contact pins

**Correction:** Remove lamp (located in the StarBright® swivel connector) and clean contact pins with isopropyl alcohol.

**Cause:** Faulty connector sockets

**Correction:** Verify lamp contact pins are properly seated into connector sockets. Clean contact pins of lamp and connector sockets.

**Problem:** YELLOWISH LIGHT

**Cause:** Debris on optical surfaces

**Correction:** Clean optical surfaces. Refer to Swivel Connector Instruction Manual, StarDental Part #62549.

**Problem:** REDUCED LIGHT

**Cause:** Low voltage

**Correction:** It is recommended that a qualified service technician be employed for this purpose: Verify correct adjustment of lamp voltage, refer to Adjusting Lamp Voltage section. If voltage is adjusted correctly and problem persists, contact Customer Service at the number listed below.

**Note:** If a problem persists, contact dealer for further assistance or contact **StarDental** Customer Service at 1-866-DTE-INFO.

## Replacement Part Numbers

Always insist on **StarDental** parts for best performance.

Description	Item Number
StarBright Single Lamp Control system.....	265677
StarBright Dual Lamp Control System .....	265676
StarBright AC Adaptor .....	265672
Lamp, Xenon-Halogen Lamp, 3.3 Vdc for StarBright (Pkg. of 2) .....	262522
Lamp, Xenon-Halogen Lamp 3.1 Vdc for non-Star tubing (Pkg. of 2).....	262962

**Note:** Use StarDental power supply (part number 265672) with the StarBright Lamp Controller. Use of other power supplies may cause damage to the Lamp Controller.

Description	Tubing Item Number
6' Straight, Sterling.....	266170



For new products, manuals and technical information, call **1-866-DTE-INFO** or visit our web site @ [www.dentalez.com](http://www.dentalez.com).

### IMPORTANT NOTICE ABOUT RETURNING PRODUCT TO THE DENTALEZ INC.

Anyone wishing to return any **DentalEZ** Inc. product to a **DentalEZ** facility MUST obtain the proper RETURN AUTHORIZATION NUMBER from the Customer Service Department.

The RA Number must appear clearly marked on both the outside and inside of the returned product carton. When calling for a return authorization number you will be asked to provide the following information:

To Obtain A Return Authorization Number, Call **1-866-DTE-INFO**

- Product Name, Model Number or Part Number
- Serial Number of Product
- Dealer Return Purchase Order Number
- Reason For Return
- Copy of Invoice Showing Purchase

Items will be evaluated. Return Authorization Number is not a guarantee for credit. Your cooperation with this procedure will help us expedite processing of any returns.

### Limited Warranty

**StarDental® StarBright Lamp Control System** (including Lamp Control and Power Supply) are warranted against defects in material and workmanship for 12 months from date of purchase. Lamps are specifically excluded from this warranty. This warranty is subject to the following conditions:

This product must not be abused and must have been operated in accordance with procedures detailed in this manual.

Any replacement parts must be genuine **StarDental** parts.

**StarDental** will, without charge, repair or replace (at its sole discretion) any defective part(s) covered in this warranty, providing above conditions are met and the product is returned through an authorized **StarDental** dealer. You must have a copy of your original invoice to qualify.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR USE.

**StarDental® Instruments**

### WARRANTY REGISTRATION

PLEASE VISIT THE WEBSITE BELOW TO REGISTER YOUR STARDENTAL PRODUCT. THIS WILL ENSURE PROPER REGISTRATION AND PROMPT AND ACCURATE SERVICE SHOULD ANY OF YOUR PURCHASES NEED EVALUATION OR REPAIR DURING THE WARRANTY PERIOD.

StarDental® Products: [www.dentalez.com/warranty](http://www.dentalez.com/warranty)