TransCure-A

▪L.E.D. Composite Curing Light
▪Clinical Diagnostic Transilluminator

The **TransCure-A** is a combination curing light and Intraoral illumination system designed to be permanently installed into a delivery unit. The system consists of a wall transformer for main power source, a power pack to provide regulated operating voltages for the curing light and intraoral illuminator, an 8mm turbo (11mm optional) fiber optic probe for composite curing and a 4mm fiber optic probe for intraoral illumination. Since the **TransCure-A** unit is self contained, installation by a service technician is not necessary.

Operational Description

The **TransCure-A** system employs two intraoral probes which conveniently attach to a single cable from the unit enclosure. The white probe is used for general intraoral illumination and can also be used for Transillumination. This probe emits white light. The blue probe is used for curing light cured composites and should not be utilized for any other purpose. This probe emits high intensity blue light in the 470nm range to provide the necessary energy for initiating light cured composite restorative materials.

Each of the handpiece probes operate in a different manner in order to be consistent with their intended use. It is not required to set any controls in order to use each probe since the electronic logic system will automatically recognize which probe is attached to the power pack. Each of the probes is connected to the power pack with a single cable. This cable is terminated with a 6-pin DIN connector which provides the necessary pin-out arrangement.

Each of the probes is designed to be stored into an electrically operated standard handpiece hanger. The hanger electrical switch is utilized to signal the power pack to turn on. The electronics then determines which probe is being employed through the DIN electrical connector and initiates the proper logic sequencing.

An alternative installation method is also available that employs a foot control activation. In this case, the electrical foot control is used to signal the power pack instead of the handpiece hanger. A non-electric standard handpiece hanger is still required to store the probes when not in use.

TransCure Operation

The **TransCure-A** logic sequencing is completely automatic and will commence as soon as a probe is removed from the handpiece hanger or when the foot control is depressed in the case of foot control installation. If the selected handpiece probe is not connected to the power pack with the connection cable, then sequencing will begin as soon as the cable is connected. Each handpiece probe operates differently to accommodate its intended use. The following logic descriptions detail the various different operational characteristics.

Curing Handpiece Probe (Blue) - (Electric Handpiece Hanger)

When the curing handpiece is removed from the handpiece hanger, automatic sequence commences as follows:

1. 10 second initial delay before curing light energizes.
2. 10 second curing light ON time duration.
3. Audible beep at the end of the 10 second ON time.
4. 5 second curing light OFF duration.
5. 10 second curing light ON duration.

This sequence will repeat itself indefinitely until the curing handpiece is placed back into the handpiece hanger. The initial 10 second delay before operation is designed to permit the handpiece to be positioned within the oral cavity. The 5 second OFF delays between curing time periods is provided to accommodate checking the probe position or to reposition the probe on the tooth. Various studies have indicated a reduction of shrinkage stress associated with curing from different angles instead of just from one particular direction.

TransIlluminator Handpiece Probe (White) - (Electric Handpiece Hanger)

When the transilluminator handpiece is removed from the handpiece hanger, automatic sequence commences as follows:

1. 10 second initial delay before illuminator light energizes.
2. Intraoral illuminator light energizes.

The illuminator probe will remain ON indefinitely until the handpiece is placed back into the handpiece hanger. The initial 10 second delay before operation is designed to permit the handpiece to be positioned within the oral cavity.

Composite Curing Handpiece Probe (Blue) - (Electric Foot Control)

When the foot control is depressed, sequence commences as follows:

1. Curing light energizes immediately.
2. Audible beep at the end of 10 seconds.

The curing probe will remain ON indefinitely, with an audible tone every 10 seconds, until the foot control is released. This method of operation permits various different techniques to be employed in an effort to minimize composite shrinkage and stress.

TransIlluminator Handpiece Probe (White) - (Electric Foot Control)

When the foot control is depressed, sequence commences as follows:

1. Transilluminator light energizes immediately.

The transilluminator will remain ON until the foot control is released.

Power Pack Cable Connections