

Assembly Date:

Cleaned for Oxygen Service per MH ESR-008D

# 00XCR-1040-00

## OXYGEN-CONSERVING CANNULA FOR FLIGHT OPERATIONS UP TO 18,000 FT. MSL

The Oxyimizer nasal cannula is a disposable oxygen-conserving device that enables you to use less oxygen compared to a standard cannula. It connects directly to the outlet of an MH3 flowmeter (or MH4, by using the left hand "conserving" scale), and is the only part of your system needing routine replacement. Replacement cannulas can be purchased directly from Mountain High E&S Company.

### ADVANTAGES OF THE OXYMIZER CANNULA FOR AIRCRAFT USAGE

**ECONOMY.** Increases the efficiency and duration of your existing system.

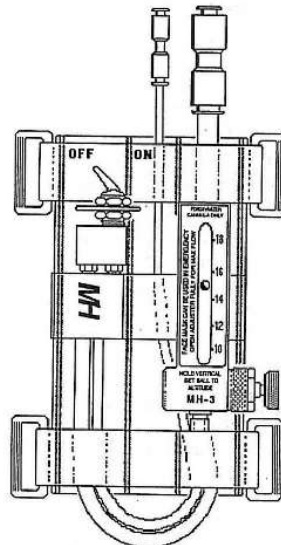
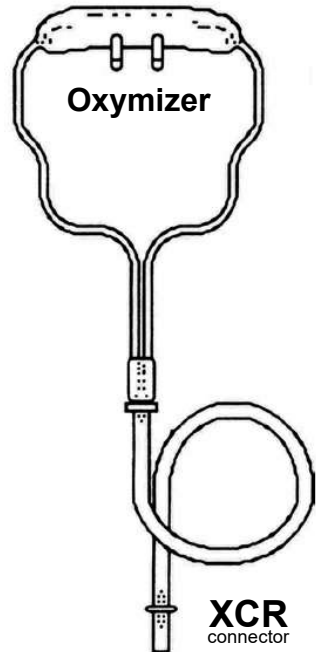
**CONVENIENCE.** Standard microphone and headphones can be used. Easy to converse, eat or drink while on oxygen. Gives you the option of downsizing to a cylinder that might be more manageable in your aircraft.

**COMFORT.** Lower oxygen flow rates reduce nasal irritation and dryness of your nasal passages. Fewer headaches, less eye irritation.

A "Pendant" style cannula is also available. Contact MH Customer Service for help in selecting a cannula for your particular needs.

### XCR Systems

The 00XCR-1040-00 Oxyimizer "Mustache" style cannula is standard issue with XCR systems, but is functionally interchangeable with the 00XCR-1042-00 "Pendant" style cannula. XCR cannula assemblies are intended specifically for use with XCR systems and are unlikely to be compatible with other systems.



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# OXYMIZER

By Chad Therapeutics

## DISPOSABLE OXYGEN-CONSERVING DEVICES

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### USER INSTRUCTIONS

#### INSPECTION

Your Oxymizer cannula should be inspected for damage or leakage before each flight. To do so, use your fingers to plug each nasal prong tightly, then create a slight positive pressure on the cannula inlet tube with your mouth. Place the facepiece side of the cannula to your ear to check for any sounds indicating leakage of the internal membrane. It should be air tight. Any leaks warrant complete replacement of the cannula.

#### HYGIENE

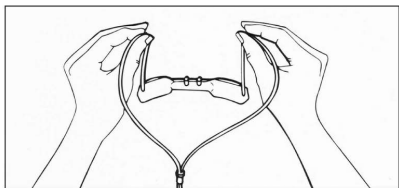
Each person should have their own Oxymizer cannula.

After each use, wipe the nasal prongs and surrounding area with a **Clean4Sure** wipe (MH p/n 00VEN-0077-00) or standard alcohol wipe.

Discard and replace your cannula when it becomes excessively soiled.

#### TO PUT ON THE OXYMIZER

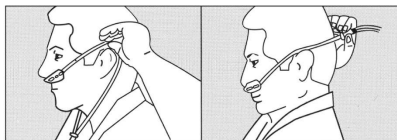
- 1 Slide the loop adjustment collar (bola) down to enlarge the size of the loop.



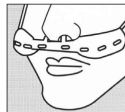
- 2 With the back of the facepiece toward you, pick up the OXYMIZER with one of the small flexible plastic tubes in each hand, as if putting on eyeglasses.



- 3 Place the flexible plastic tubing over your ears (as if putting on glasses) and under your chin or pass the tubing over your ears and around the back of your head.



- 4 The facepiece should rest on your upper lip under your nose, with the oxygen-delivering prongs extending well into and pointing towards the back of your nose.

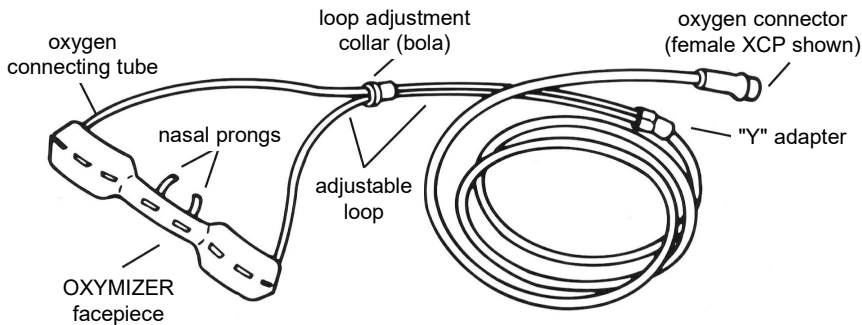


- 5 Slide the bola up toward your chin to hold the cannula snugly and comfortably against your face.



- 6 Connect the cannula tubing to your flowmeter (or other flow-metering device as part of your oxygen system).

- 7 Turn on the oxygen and set the proper flow rate based on your altitude and personal needs.



## REPLACEMENT

Discard and replace your cannula whenever the conserving reservoir develops a leak (see "INSPECTION", opposite) or the cannula or cannula assembly is otherwise damaged. This helps to ensure maximum effectiveness and optimal oxygen conservation.

Likewise discard and replace your cannula whenever it becomes discolored or excessively soiled. While the exterior of the cannula can be kept relatively clean by the routine use of sanitizing wipes (see "HYGIENE", opposite), the interior portions can still harbor bacteria between uses. For hygienic reasons, you should replace your cannula "regularly".

The membrane that is part of the conserving reservoir can deteriorate with time and use, and when employed constantly for oxygen therapy, it is recommended that cannulas be replaced every 3 weeks. However, considering the intermittent use in an aircraft oxygen system, you will be far more likely to reach a state of unsatisfactory hygiene long before the cannula itself starts to degrade. Replace your cannula "regularly".

## OXYGEN CONSERVATION

A conserving cannula reduces your oxygen usage to approximately 1/2 to 1/3 of what you would otherwise use with a conventional cannula (which means that your oxygen supply can last 2 to 3 times longer!). This range of values reflects different flow profiles at different altitudes. You may also need to adjust for your personal needs.

If you use a portable oxygen system, it will effectively have a longer duration when using the Oxyimizer cannula. This allows you to make longer duration flights, or fly longer between refills with your present cylinder. It may also give you the option of downsizing to a smaller, lighter weight, more manageable cylinder.

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## PRINCIPLES OF OPERATION

*(Extracted from manufacturer's reference material)*

The Chad Oxymizer oxygen-conserving device is a type of nasal cannula breathing device that incorporates an oxygen-conserving reservoir. The Oxymizer Moustache style cannula incorporates the conserving reservoir into a soft and lightweight facepiece that conforms easily and comfortably to the user's face, while the Pendant style cannula contains the conserving reservoir in a "pendant" that rests on the user's chest. The pliable nasal prongs are comfortable and pressure on the septum (dividing wall between the nostrils) is reduced.

The Oxymizer's unique oxygen conserving reservoir design accumulates (saves) the continuous flow of oxygen normally wasted during exhalation. The saved oxygen is available as a bolus at the very beginning of each inhalation cycle where oxygen is taken deeper into the lungs, allowing a much greater absorption efficiency. Thus, a smaller flow rate is required over conventional cannulas. This permits drastic reductions in the oxygen flow rates while maintaining proper oxygenation of the blood. As a result, the contents of a portable oxygen system last much longer, increasing the oxygen availability as much as 75%.

In extensive studies, the blood saturation levels of pilots were measured while receiving oxygen via a standard cannula and the Oxymizer conserving device over a range of 10,000 to 22,000 feet. In all cases the Oxymizer device provided equivalent saturations at much lower flow rates than the standard cannula. Investigations in more than twenty clinical studies have confirmed similar findings, both at rest and during exercise.

The Oxymizer can be used to satisfy the FAA requirements for providing supplemental oxygen for pilots and passengers up to 18,000 ft. The FAA requires that there be a standby facemask available for each occupant in the event that the user should develop a cold with nasal obstruction or congestion while breathing supplemental oxygen with a cannula device. Pilots should refer to FAA regulations (**FAR 23.1447**) to see if any restrictions apply for their use of cannula type breathing devices in the operation of their aircraft.

**NO SMOKING while using oxygen**



**MOUNTAIN HIGH**  
**Equipment & Supply Co.**

2244 SE Airport Way, Suite 100  
Redmond, OR 97756

Sales 541-923-4100  
Toll Free: 1-800-468-8185  
Fax: 541-923-4141

[sales@MHoxygen.com](mailto:sales@MHoxygen.com)  
[www.MHoxygen.com](http://www.MHoxygen.com)