

OCEAN TECHNOLOGY SYSTEMS



Stealth **Full-Face Mask**

Owner's Manual

- NOTICE -

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All statements, technical information, and recommendations herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed; and the following is made in lieu of all warranties, expressed or implied, including the implied warranties of merchantability and fitness for purpose: Seller's and Manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Before using, the user shall determine the suitability of the product for intended use, and the user assumes all risk and liability whatsoever in connection therewith. Neither Seller nor Manufacturer shall be liable either in tort or in contract for any loss or damage—direct, incidental, or consequential—arising from the use of or the inability to use the product. No statement or recommendation not contained herein shall have any force or effect unless it is in an agreement signed by officers of the Seller and Manufacturer.

- IMPORTANT SAFETY NOTICE -
(Please read before using product)

It is absolutely essential that all divers are certified divers in good standing, properly trained, equipped, and fully understand this user's manual before attempting to use the Stealth FFM. While the Stealth does provide the diver with outstanding underwater environmental protection, *it does not change or eliminate the potential hazards of diving!*

Refer to the Library page of our Web site, www.otscomm.com for a list of any changes made to this manual since its publication.

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INTRODUCTION

Congratulations on the purchase of your new OTS Stealth Full-Face Mask! This full-face mask (FFM) is one of the few that has been designed from the ground up as a **scuba diving** mask. Years of experience has gone into the development and design of the Stealth FFM and the high performance SRG-1 Regulator. It was designed with comfort, fit, and function in mind. Having been in the underwater communications business for over two decades, Ocean Technology Systems (OTS) created the Stealth FFM based around what we've learned from listening to the needs of our customers. For years, we discussed what was needed and desired in a full-face mask. Our goal was to design a product that was comfortable, fit the vast majority of the diving population, was simple to use, and easy to maintain. More importantly, it had to be rugged and perform as well or better than anything on the market.

The Stealth FFM works with the high-performance, venturi-assisted, second-stage SRG-1 Regulator. The SRG-1 Regulator has Work Of Breathing (WOB) measurements of less than 1.4 joules per liter at 25 Breaths Per Minute (BPM) and 198 Feet of Sea Water (FSW) when used with a high-performance, high flow rate, CE approved, first stage regulator.



Rivaling the best professional bite regulators, the high performance Stealth FFM and SRG-1 Regulator are well suited for divers who require maximum comfort and capability while working in challenging underwater environments.


OTS is proud to provide you with this advanced diving apparatus and hope you enjoy it as much as we do.

All who intend to use this Stealth FFM and SRG-1 Regulator must read this manual carefully prior to preparing and using this equipment. Training must be obtained before using this or any other advanced diving equipment. Become familiar with emergency procedures and ensure you are equipped with proper bailout equipment appropriate for the type of diving you are performing. If you have any questions or don't fully understand this manual, please contact OTS directly or an authorized OTS service center (OTS contact information is listed under the "Limited Warranty" on page 24).

WARNINGS AND PRECAUTIONS

While reading and reviewing this manual, please note the following indicators for Warnings and Dangers:

 Warning Note	The “Warning” symbol indicates something that might cause damage to the equipment, or, if not properly performed, may lead to a hazardous situation that could cause injury or death.
 Danger Note	The “Danger” symbol indicates a most important point that if not avoided will result in a situation that causes injury or death.

 Warning Note
<ul style="list-style-type: none">• Diving a Stealth Full-Face Mask or any scuba diving equipment without proper training and experience can result in serious harm or death.• This is an advanced piece of diving equipment that requires special training and practice prior to diving it in an open water environment. Proper maintenance and care of this equipment is essential for safe operation.• Have the Stealth Full-Face Mask and other equipment serviced on a regular basis. This should be at least annually, more if the equipment is used extensively or in environments that would require decontamination. Do not dive any equipment that is not properly maintained, damaged, or worn.• Always inspect the Stealth Full-Face Mask for damage prior to diving if you suspect it has been subjected to any abuse, tampering, or impact. If necessary, have it inspected by a certified OTS repair technician.• It is YOUR responsibility to insure that your equipment is in good condition and operating properly. Remember, this is LIFE SUPPORT EQUIPMENT!• Diving is an inherently dangerous sport. Participating in this activity puts you at risk of serious injury or even death.• The minimum operating temperature recommended for this regulator for scuba is 37 degrees F (~3°C), only in regards to SRG-1 Regulator performance.

DESCRIPTION

What is a “Full-Face Mask?”

The OTS Stealth FFM differs from standard scuba equipment in that the second-stage regulator is incorporated into the mask and the mask covers your “full” face, hence the term.

There are four primary reasons to dive a Stealth FFM:

1. Environmental protection
2. Physiological considerations
3. Communications
4. For the fun of it

Environmental Protection

Anytime a diver is in water that would be considered less than healthy (e.g., biological/chemical contamination, extreme cold, etc.), protection is of the utmost importance. The Stealth FFM affords a significant protection advantage over that of a standard bite regulator and mask. While not a substitute for full protection as required in hazmat diving, the Stealth FFM can add protection in contaminated water that standard equipment cannot. This configuration is commonly seen in light commercial and public safety diving.

Physiological Considerations

The Stealth FFM protects the diver in other ways as well. If, for any reason, a diver were to become unconscious underwater, the Stealth FFM is able to maintain a breathable airspace in front of the diver’s nose and mouth assisting in survival (assuming the scuba tank has air). This aspect of the Stealth FFM is extremely useful for divers with TMJ, dentures, disabilities, and for those divers using high concentrations of oxygen (convulsion risk; special oxygen cleaning required).

Communications

In order to use underwater communications, an airspace is required to allow for articulation and placement of a microphone. This is best accomplished with the Stealth FFM. The Stealth FFM has an oral/nasal cavity that provides optimal communications, while some FFMs have the nose separated from the mouth. This separation alters the voice slightly, as in pinching your nose when talking and does not achieve optimal underwater communications.

Training and Practice for Safety

As with any high-tech equipment, the Stealth FFM does require additional training and practice. Air sharing in an out-of-air situation is more difficult, often requiring bailing out of the mask (depending on the gear configuration). **See “Training & Emergency Procedures” on page 16 for detailed instruction on this topic.** When properly used, however, the Stealth FFM provides an additional margin of safety to diving. Proper use of communications to relay a problem, combined with the security of the five strap harness system securing the Stealth FFM, adds a degree of safety to diving not found in standard equipment.

Anatomy of the Stealth Full-Face Mask

Front Aspect

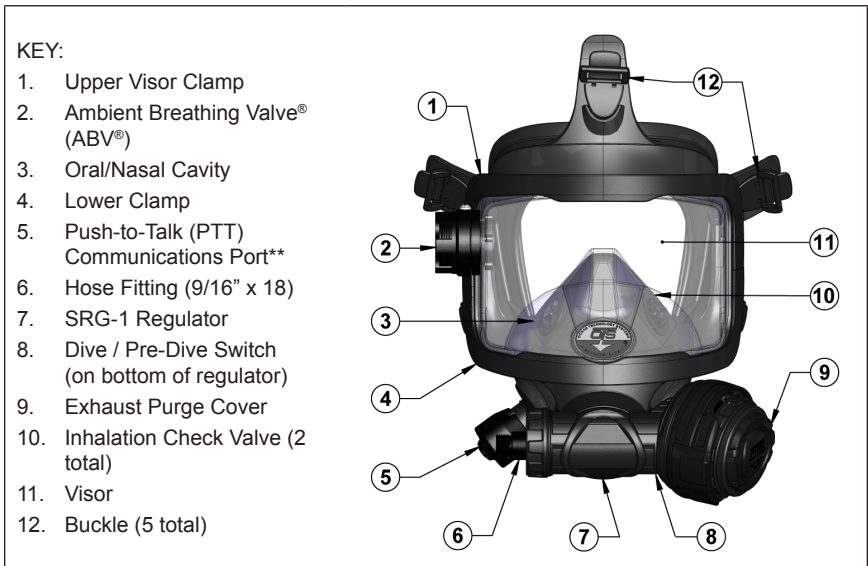


Figure 1: Front of Mask

**Shown with communications PTT switch (not included)

Rear Aspect

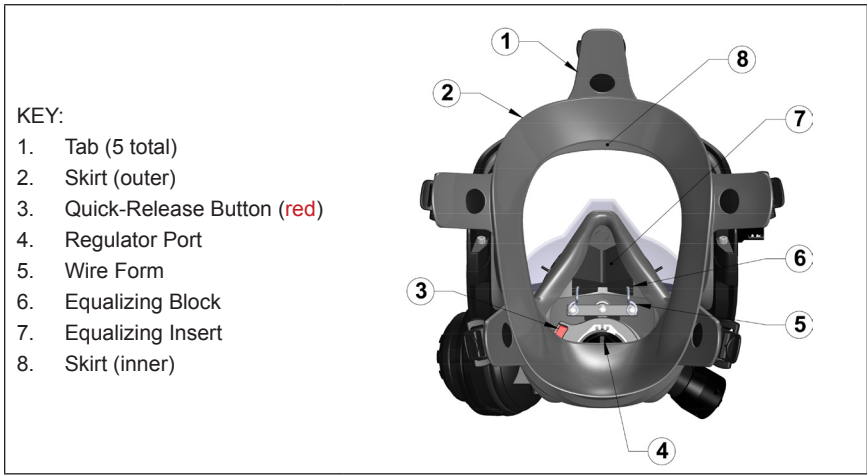


Figure 2: Back of Mask

Stealth Full-Face Mask Skirt

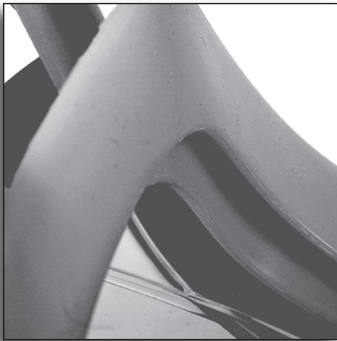


Figure 3: Double Seal

The skirt of the Stealth FFM is made of high grade (55-60 Shore A) non-allergenic silicone with some unique features that add to its durability, comfort, and functionality. We have designed the mask with a double seal (Figure 3). allowing for more comfort and better sealing of the mask. This unique design ensures the Stealth FFM will fit virtually every type face, small to large.

Additionally, the tabs to the buckles are designed to minimize any damage resulting from improper donning of the mask. These tabs have “button-holed” buckles—

meaning if the head harness is pulled too hard and out to the sides, the buckle will pull from the “button-hole.” While this will require reassembling the buckle onto the skirt, it helps prevent damage from occurring to the skirt. The buckles are made of nylon and are not prone to corrosion.

Visor, Frame, and Ambient Breathing Valve®

Visor

The Stealth FFM visor is constructed of high strength polycarbonate. Although scratch-resistant, it is not scratch-proof. Protect the mask when not diving by storing it in its bag. When diving, minor scratches on the outside of the visor are difficult, if not impossible, to see due to water filling

the scratch. It is important to protect the inside of the visor from scratches as those will be visible.

Frame

The visor is held in place with the visor frame. This frame consists of the upper and lower visor clamps. Constructed of glass filled nylon, these clamps are secured by a pair of stainless steel Allen head screws (6-32 x 1", 7/64" Hex), one on each side of the clamps. The upper visor clamp has a channel on the back that retains the cable for the left earphone when utilizing an earphone and microphone assembly (P/N 910369-000 with Hot-Mic® and P/N 910379-000 with Super Mic®, available separately) for communications. The lower visor clamp contains the regulator port, regulator "quick-disconnect" (see Figure 4 on page 8) on the interior of the mask, and the inhalation vents.

ABV

The Ambient Breathing Valve® (ABV®) is designed to conserve the diver's air while on the surface. This is NOT a snorkel. Generally, when diving with a FFM, the diver is breathing off of a scuba tank. With the ABV in the open position and on the surface, the diver is able to breathe ambient air **without** removing the FFM. There is a check valve on the inside of the ABV which allows ambient air to enter the valve only; air is exhaled out through the regulator. This also prevents air from escaping through the ABV should it be open underwater.

It is extremely important that the diver's air supply is turned on prior to diving. If the mask (with the regulator) is put on and the diver is breathing through the ABV, the diver could unknowingly enter the water without air. If a diver's air is turned on upon surface entry and positive buoyancy is not established, the ABV will be unable to inflate a BCD or drysuit and drowning or injury may occur.



Danger Note

ALWAYS ensure the diver's air supply is turned ON prior to entry into the water! CLOSE THE ABV, test breathe the mask and regulator with at least two full breaths and watch the submersible pressure gauge! There should be a slight drop in pressure. This will ensure the diver has the air supply turned on prior to diving. Add sufficient air to the BCD to have positive buoyancy upon entry. **Make this a matter of routine prior to entry.** Failure to do so can result in serious injury or death. Ensure visor clamp screws are in place and securely fastened before diving. If missing a screw, DO NOT DIVE FFM.

Operating the ABV is simple. Rotate the valve counterclockwise to breathe ambient air. Rotate the valve fully clockwise to close ABV and breathe from the scuba tank).

Note: If the ABV is in the open position (counterclockwise) and the regulator functions when you breathe, the regulator is out of adjustment and should be tuned by a OTS certified technician.

It is extremely important to verify the ABV is closed (fully clockwise) before descending.

Regulator to Mask Interface and Air Flow

The SRG-1 Regulator is specifically designed for use with the Stealth FFM. The design allows inhaled air to flow in a directional manner through the mask. As the diver inhales, air is injected through vents below the visor, flushing the mask with cool, dry air to keep the visor defogged. Air is pulled through one-way (check) valves located in the oral/nasal cavity and inhaled by the diver. The diver then exhales through the diaphragm assembly of the SRG-1 Regulator, resulting in a one-way flow of air through the system. There is virtually no “push-pull” of inhaled and exhaled air, resulting in extremely efficient CO₂ washout. CO₂ is what triggers your urge to breathe. Any accumulation of CO₂ can cause an increased rate of breathing—thus higher air consumption.

The SRG-1 Regulator is also designed to increase air supply when needed (for example during physical, job-related work). An advanced venturi-assisted jet system dynamically adjusts to air demand, rushing air directly into the FFM's oral/nasal cavity when the rate of breathing increases.

The SRG-1 Regulator is “venturi-assisted” to lower the work of breathing. The venturi effect occurs when a flow across a diaphragm creates a vacuum, further opening the flow-regulating valve attached to the diaphragm, resulting in stronger flow.

The low work of breathing in the advanced venturi-assisted jet system is achieved as follows: the faster the diver's rate of breathing, the more the venturi effect opens the system's valve, the stronger the air jet streams to the diver, the less exertion is required by the diver to draw air, and the increase air demand is quickly met. The result is comfortable and effortless breathing throughout the dive.

Thorough testing of the placement and shape of each component creates an advanced design achieving bite-regulator performance with a side-exhaust regulator when paired with a Stealth / Guardian Full-Face Mask.

The SRG-1 Regulator attaches to the mask in the port of the lower clamp. There is a red “quick-release” button on the inside of the mask (Figure 4) that allows for both easy removal and positive locking of the SRG-1 Regulator in the assembly. The SRG-1 Regulator is keyed to ensure proper orientation when it is mounted to the mask with the low-pressure hose routed over the right shoulder.

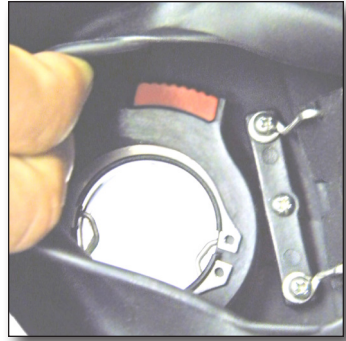


Figure 4: Regulator Quick-Release Button

The innovative quick-release allows the diver to disengage the SRG-1 Regulator from the mask for storage and cleaning. The SRG-1 Regulator can then remain with the first stage regulator.



Warning Note

Prior to diving, verify the o-ring on the SRG-1 Regulator is in place and free of debris. Insert the SRG-1 Regulator into the regulator port in the front of the mask completely—you should hear a “click” when it locks. Ensure the SRG-1 Regulator is positively locked in place by pulling on it. It should be tight with no movement and will not dislodge.

To provide maximum performance, the SRG-1 Regulator has a venturi assist. The SRG-1 Regulator can free flow when purge is depressed, or when the SRG-1 Regulator and mask are dropped in the water with the vents facing up. To control this, a dive / pre-dive switch is included to allow the diver to quickly shut off a free flowing SRG-1 Regulator (Figure 5).

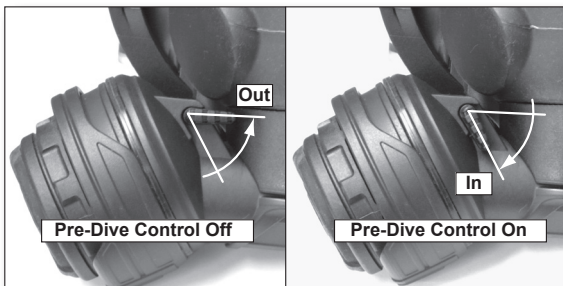


Figure 5: Dive / Pre-Dive Switch (bottom of regulator with mask on top)

The SRG-1 Regulator can be dived with the switch pushed in or out. The switch may be manually pushed out at any time. If the regulator goes into a free flow while the mask is not donned, simply press the dive / pre-dive control switch in and this will halt the free-flow. Before donning and doffing the mask, push the switch in to prevent free flow. When the mask is securely donned, push the switch out to provide maximum performance. The regulator should be stowed with the dive / pre-dive control off and the switch out.

Note: It is recommended that once the mask is donned, turn off dive / pre-dive control by pushing switch out. Whenever doffing the mask in or out of water, always turn on dive / pre-dive control by pushing switch in.

The SRG-1 Regulator is a balanced, downstream valve designed for excellent performance. The threads of the hose connector are SAE standard 9/16" x 18. A 32" low-pressure hose is included with the Stealth FFM.



Figure 6: Five-Point Strapping

Head Harness Assembly

The Stealth FFM uses a five-point strapping system (Figure 6). Buckles are mounted by a button securely on tabs that are a part of the skirt. If needed, they are replaced easily by stretching the tab and either removing or replacing the button end of the nylon buckle.

PRE-DIVE SET-UP AND INSPECTION

Regulator Set-Up and Hose Configuration

Install the SRG-1 Regulator low-pressure hose to the first stage regulator. This hose routes over the right shoulder. The male end of the hose is best installed into a low-pressure port that allows for cleanest routing to the SRG-1 Regulator.

Remove the SRG-1 Regulator from the mask by pressing the red button located on the inside of the oral/nasal cavity (Figure 4 on page 8), and pulling outward on the SRG-1 Regulator (Figure 7).

Using two wrenches, attach the female end of the low-pressure hose to the SRG-1 Regulator (Figure 8). An OTS Wrench (P/N 137053-000) is supplied with the Stealth FFM; use this on the SRG-1 Regulator and another wrench on the hose fitting.

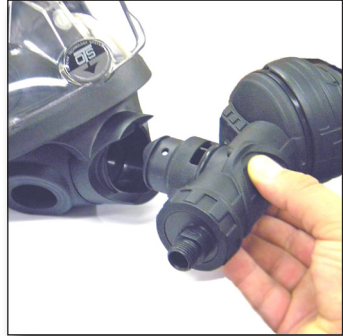


Figure 7: Removing SRG-1 Regulator



Figure 8: Fitting Hose to SRG-1 Regulator



Warning Note

Do not tighten the hose with a single wrench—always use a back-up wrench. Improper tightening can damage the internal components of SRG-1 Regulator, resulting in potential failure.

Pressurize the system and check for leaks. Ensure the dive / pre-dive switch is pushed in. Lightly depress the purge cover and test for airflow.

Note: Fully depressing the purge button may disengage the dive / pre-dive switch from in to out and may cause venturi action with maximum airflow. Simply push the switch in to stop the free flow.

Air will be directed through the channel at the top of the regulator port insert. Insert the SRG-1 Regulator into the regulator port of the lower clamp and test breathe the mask.

Equalizing Assembly

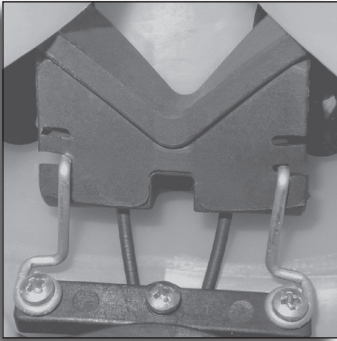


Figure 9: The Equalizing Assembly

The Stealth FFM has an equalizing block assembly and kit that allows the diver to equalize the ears. This kit consists of an adjustable, slotted, rubber base equalizing block mounted on a wire form (Figure 9), along with several inserts of varying thickness (Figure 10). The inserts secure to the block with two pull-tabs which are installed through a pair of holes in the equalizing block. OTS also provides an equalizing block without holes (to be used without inserts for lower settings), giving the diver even more options to choose from. Additional wire forms are available by contacting OTS directly.



Figure 10: Inserts of Varying Thickness

Utilizing these components will allow the diver to vary the height of the equalizing assembly and fit each individual's face. This feature gives the Stealth FFM an increased range of comfort and performance for virtually any diver.

Equalizing in the Stealth FFM is easy. The rubber, v-shaped equalizing block is designed to fit under the nose and when properly adjusted, the diver should be able to breathe through the nose with little, if any resistance. To equalize, compress the mask enough to move the equalizing block up against the nostrils. This allows the diver

to exhale against the block and equalize.

*Note: This adjustment has little to do with the size of the diver's nose, rather the distance from the base of the nose to the bottom of the chin that is relevant. Because every face is different, it is very important that time is taken to determine which configuration is best each diver. Ensure the equalizing assembly is set up and easy to do **prior to diving.***

Installation of Communications

The Stealth FFM is designed to accept Ocean Technology Systems (OTS) communications. There are two primary communication systems designed specifically for the mask: The Buddy Phone® (see “**Buddy Phone® Installation Instructions**” on page 21) and the OTS earphone and microphone assembly (see “**EM-OTS-2 Installation Instructions**” on page 22).

The Buddy Phone is a stand alone communications system designed with the transceiver mounted on the head harness located on the right side of the diver’s head. The Buddy Phone has a built-in earphone.

The OTS earphone and microphone (EM) assembly is for all other through-water and hardwire communications systems. Regardless of the system, the EM assembly mounts to the mask in the same manner.

If the Stealth FFM was purchased without communications equipment, there will be a blanking plug installed in the communications port. This consists of a plug on the inside (of the mask) secured with a threaded, locking ring on the outside (Figure 11). To remove, use the OTS wrench (P/N 137053-000) to unscrew the locking ring counterclockwise and remove the plug from the inside.

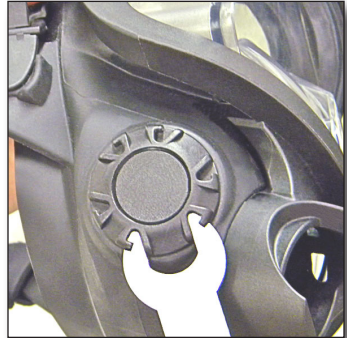


Figure 11: The Blanking Plug

Preparation and Adjustment

Prior to diving the Stealth FFM, examine it for any damage and ensure proper assembly. Fully extend the head harness on all five (5) straps. **Never** pre-adjust the straps—they will need to be tightened every time the mask is donned. Move any communications equipment, such as the Buddy Phone or EM assembly to the rear of the harness. This will ensure proper tightening of the straps upon donning. Failure to do so may result in the buckles binding, not tightening.

Prior to turning on air, push the dive / pre-dive control switch in and turn the ABV® valve to open. This will prevent air leakage prior to diving. When ready to enter the water, close the ABV valve and push the dive / pre-dive control switch out.



Warning Note

ALWAYS inspect your diving equipment to ensure it is not damaged or defective and that it is fully functional. DO NOT dive the Stealth FFM or any other equipment if you have not verified that it is in good condition and working properly! If this equipment has been damaged, tampered with, or found to be defective, return it to OTS or have a qualified technician inspect it immediately.

DONNING

Overall Safety Inspection

Prior to donning the Stealth FFM, examine the complete assembly along with the rest of the gear to ensure that it is in dive-ready condition. The diver is ultimately responsible for his/her equipment. Confirm that the SRG-1 Regulator's dive/pre-dive switch is in and that the ABV® is opened. Turn the air on and examine the SRG-1 Regulator assembly for leaks. Check all buckles, strap assembly, visor clamp assembly, visor, skirt, SRG-1 Regulator and quick disconnect. Test that the SRG-1 Regulator positively locks in place once inserted into the mask. Then extend all straps and prepare to don the mask. Establish equalization is in good working order.

Hoods and Seals



Figure 12: Fit Mask Skirt onto Skin, Not Hood

To achieve the best seal, the mask skirt should be fitted **directly** onto the skin of the diver's face (Figure 12). Do not attempt to seal over or against a neoprene hood as this will result in leaking, excessive air consumption, and hood inflation. A neoprene hood can be trimmed to allow for the mask to seal properly against the face.

For dry suits that have latex seals, the mask may be worn directly over the hood. This type of hood allows for the mask to seal properly over the hood and the hood seals to the face.

Donning and Adjustment

Proper donning of the Stealth FFM is crucial when using diving equipment. An improperly adjusted mask will result in jaw fatigue, increased air consumption, leaking, and an overall poor fit.

The Stealth FFM comes in a single size designed to fit the widest range of faces. First and foremost the Stealth FFM must be fitted to the chin; the rest of the mask will seal to the face where it lays.

With the mask straps fully extended, move the communications (either the Buddy Phone or EM assembly) as far as possible to the rear of the straps to prevent them from binding against the buckles. Open the lower straps and bring the mask and harness over the head (Figure 13). Ensure the harness is straight and the center is low on the back of the head.

Hold the Stealth FFM to the face with one hand and tighten the lower (jaw) straps one at a time, switching hands to accommodate tightening the other. Pull the straps toward the back of the head, **not** out to the side. Tighten the straps evenly to prevent pulling the back of the head harness off center. Do not overtighten.

Next, tighten the temple straps evenly. If necessary, tighten the top strap just enough to pull the top of the skirt tighten to the forehead. **DO NOT OVERTIGHTEN THE TOP STRAP!** This can result in jaw fatigue after just a short period of time. Wiggle the Stealth FFM on the face to ensure the mask is in proper position and centered with no stress points. Evenly tighten the straps (Figure 14) to the desired tension, again not overtightening the straps. The mask should be comfortable on the face.



Figure 13: Open Lower Straps and Bring Over Head



Figure 14: Tighten Straps Evenly

Overtightening the top strap will cause the center of the head harness to sit high on the back of the head. This results in the mask being pulled **up** on the face and not **back**, as desired. Consequences of this error include possible leaking, jaw fatigue, and an uncomfortable dive. If there is the need to tighten the top strap, pull down on the back of the head harness to ensure its proper positioning low on the back of the head. Tighten the top strap as necessary.

Finally ensure equalization is achievable. Most will find that pushing up on the regulator at approximately 45° angle will work. For others, pushing in on the top of the visor will allow equalization. If the pad is too high, the diver will not be able to breathe through the nose when wearing the Stealth FFM. If the pad is too low, the diver will not be able to reach the nose to equalize. The Stealth FFM comes with an equalizing assembly kit that allows a diver to adjust the height of the pad. Each base pad (equalizing block) has two adjustment slots. (See www.otsgcomm.com/full-face-mask-training-videos/ for demonstration.)

Testing the ABV

On the surface, with the SRG-1 Regulator properly installed, the air supply turned on, and the dive / pre-dive switch pushed in, open the ABV. The diver should now breathe ambient air and the SRG-1 Regulator will not draw air. Close the ABV. When drawing air, SRG-1 Regulator should supply the air.

If the SRG-1 Regulator functions while the ABV is in both the open and closed positions, the SRG-1 Regulator is adjusted too sensitive and needs to be serviced.

DIVING THE STEALTH FULL-FACE MASK

Pre-Dive

Once the diver has donned the Stealth FFM and ensured the air is on, check the system by closing the ABV. The SRG-1 Regulator should breathe easily and the diver will feel air as it flows through the visor area of the mask. There should be very little exhalation resistance.

Prior to entering the water, close the ABV and check the submersible pressure gauge (SPG). This is done by taking two deep breaths through the mask while observing your SPG. There should be a **slight** drop in pressure. If there is a significant drop in pressure, check that the air supply is working properly. If the gauge shows a drop, and the air supply is turned on correctly, have the equipment examined immediately for proper function.

Training & Emergency Procedures

Regardless of prior FFM diving experience, take some time to dive the Stealth FFM in a pool or similar environment. Follow the guidelines in this manual and seek additional instruction if necessary. Learning how to dive the Stealth FFM to a point that feels **completely** comfortable with all aspects is critical. In addition to procedures on using the equipment, there are emergency procedures for out-of-air (OOA) situations and possible equipment failure situations requiring bailout and switching to an alternate air source. Do not dive this assembly or any equipment until properly mastering these emergency procedures!

As part of the basic familiarization with the Stealth FFM, bailout procedures are a **required** skill. In the event of an OOA situation, the diver must have an available source of back-up air. A pony bottle or dive buddy needs to be close by. A practice session should start in the shallow end of a swimming pool or similar environment, working either at the bottom or a fixed point so not lose control of depth or position in the water column.

FOR BAILOUT PROCEDURES:

- ALWAYS have an available source of back-up air (pony bottle, dive buddy, etc.) and know its location.
- Do NOT hold your breath!
- Start practice sessions in shallow end of swimming pool or similar environment.
- During practice, work at the bottom or a fixed point in the pool.
- It is recommended that you carry a spare mask.

Emergency Procedures

First, know the location of the alternate air supply, then start by pushing the dive / pre-dive switch in. This prevents venturi free flow. Remove the Stealth FFM. This is best done by grasping the bottom of the mask and placing the thumbs on the lower buckle tabs. Pull out on these tabs, loosening and rotating the mask forward and back over the head. Exhale slowly, do not hold breath. Obtain the alternate air source, clear the regulator, and breathe normally. Don a spare mask, or terminate the dive without one.

This skill takes practice and preparation! Keep working on the bailout technique until mastering this skill.

Additional training and procedures are recommended in diving in extreme cold / ice environments.

Another important skill is donning the mask while underwater. Begin by setting up the mask in the same way as donning it on the surface (extending the straps, pulling any communications to the rear, etc.). Prepare to be without air for the short time it takes to perform this exercise. Remove the spare mask, if applicable, as well as the alternate air source. Again, **do not hold breath**. Slightly exhale continuously. Drop the mask over the head and press the mask to the face.

To clear the mask of water, if you have sufficient air in your lungs, start to exhale as this will displace the water and clear the mask. At the same time, look up at about a 45° angle, pull out slightly on the bottom of the mask, then push the purge on the regulator halfway. This will clear the majority of the water from the mask.

If there is not sufficient air in the diver's lungs, push the purge button the Stealth FFM halfway until the mask is cleared of water.

Note: Only depress the purge button about halfway, or enough to purge the regulator. Do not forcefully press the purge button. Forcefully pressing the purge button will disengage the dive / pre-dive switch from in to out, resulting in venturi free flow.

Take a cautious breath to ensure the mask has cleared and to prevent inspiring any residual water. After the first inhalation, look down and exhale **forcefully** to clear any remaining water. Repeat this forceful exhalation a few more times. Again, ensure this skill is mastered.

Training Tips

Upon surface entry, ensure the ABV is closed, secure the mask to the face with one hand. Breathe normally and **never** hold breath. Upon descending, equalize as previously described, early and often, prior to experiencing any pain or significant pressure. Stop descending if equalization cannot be achieved or if pain occurs, descending **only** if proper equalization can be achieved.

If the mask requires adjustment while diving, tighten the straps as required. Be careful not to overtighten. Upon surfacing, open the ABV to breathe surface air if necessary. The mask will need to be completely out of the water for the ABV to function. Inflate BCD and swim on back if a surface swim is required. It is recommended that removal of the mask occurs only after exiting the water. This is important if the quality of water is contaminated.

Note: The diver should plan the dive to be back to the boat or beach while air is still available in the tank.

To remove the mask (Figure 15), push the dive / pre-dive switch in, then grasp the regulator/bottom of the mask with both hands and use thumbs to grasp bottom buckle tabs and loosen. Then, pull the mask out and off of the head.



Figure 15: To Remove Mask, Use Thumbs to Grasp Bottom Buckle Tabs and Loosen



Warning Note

If diving in an extreme cold environment, caution must be used to prevent ice build-up that could interfere with the function of the quick-release mechanism. If necessary, refrain from removing the SRG-1 Regulator from the Stealth FFM unless the mechanism is dry. Also, keep the inside of the Stealth FFM dry when possible.

Post-Dive Procedures

After a diver has completed diving, remove the Stealth FFM from the SRG-1 Regulator (See “SRG-1 Regulator Set-Up and Hose Configuration” on page 10) by disengaging the SRG-1 Regulator with the quick-release button on the inside of the Stealth FFM. Thoroughly rinse the Stealth FFM in clear, fresh water and pat it dry with a lint-free absorbent cloth. If necessary, a mild detergent may be used for cleaning the Stealth FFM. **Never** use any harsh detergents, abrasives, or solvents on your Stealth FFM. Use caution when drying the visor after diving in a sandy environment to prevent any scratching of the lens. **Do not use** paper towels to dry or clean visor—scratching of the lens may occur.



Warning Note

If the Stealth FFM and/or SRG-1 Regulator has been exposed to contaminated water it should be disassembled and cleaned by an OTS certified technician

Hang the Stealth FFM upside down to allow for any trapped water to drain to the top of the skirt. Wipe out the excess water and allow the Stealth FFM to air dry prior to storing in the Stealth FFM bag. If stowing a damp mask, remove it from the bag as soon as possible and allow it to dry completely to prevent any mold and mildew from forming.

Rinse the SRG-1 Regulator with regulator assembly. Flush the SRG-1 Regulator with fresh water. Do not push the purge button when rinsing the SRG-1 Regulator. Shake any remaining water from the SRG-1 Regulator and stow it with the assembly. The SRG-1 Regulator should be stowed with the dive / pre-dive switch off and the switch out.

PART LISTS

Accessories Included

In addition to the Stealth FFM and SRG-1 Regulator, each Stealth FFM System comes with the accessories listed in Table 1.

Table 1: List of Accessories Included

Part Number	Description
134153-001	CASE, FULL-FACE MASK, CUSTOM OTS (“OTS Bag”)
604018-001	HOSE, LPMFX-32, MIFLEX, XTREME, BLACK HRDWR, 32”
920010-000	OTS-ABV-2 (installed)
506129-001	MANUAL, OPERATIONS, OTS, STEALTH FFM (“Owner’s Manual”)
910385-000	EQUALIZING KIT, OTS, FFM
137053-000	WRENCH, VALVE BASE, REGULATOR (“OTS Wrench”)

Stealth FFM

Each consumer-removable item of the Stealth FFM is listed in Table 2 and shown in Figure 16 on page 20.

Table 2: Stealth Guardian FFM Part List

Item	Part Number	Description
1	876001-000	PLUG, COMPORT, BLANKING
2	246025-001	NUT, COMPORT, BLANKING PLUG
3	872003-000	LOCK, BUCKLE, MASK STRAP
4	872001-000	BODY, BUCKLE, MASK STRAP
5	872006-000	STRAP, MASK
6	282035-000	DIAPHRAGM, ONE-WAY VALVE, OTS FFM
7	872004-000	SEAT, ONE-WAY VALVE, MASK

SRG-1 Regulator

Each consumer-removable item of the SRG-1 Regulator is listed in Table 3 and shown in Figure 17.

Table 3: SRG-1 Regulator Part List

Item	Part Number	Description
1	604018-001	HOSE, LPMFX-32, MIFLEX ,XTREME, BLACK HRDWR, 32"
2	940004-000	REGULATOR, GUARDIAN, SRG-1

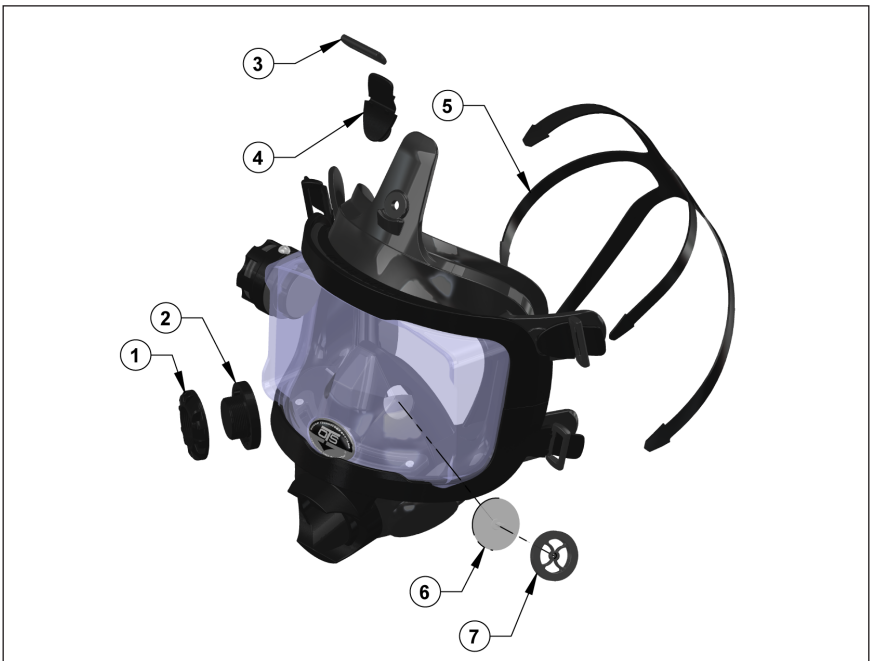


Figure 16: Stealth FFM Exploded View

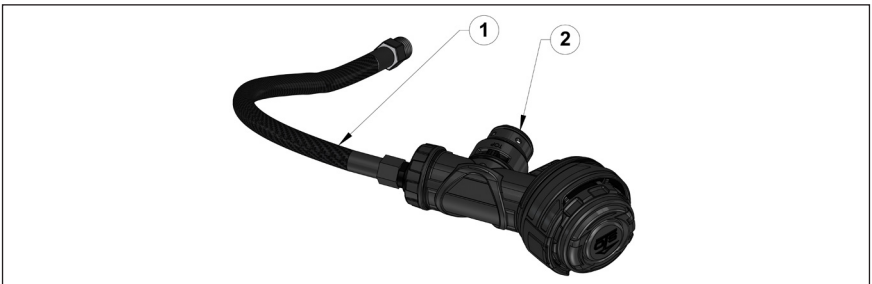


Figure 17: SRG-1 Regulator Isometric View

BUDDY PHONE® INSTALLATION INSTRUCTIONS

Refer to Figure 18 and proceed as follows:

1. Locate the communications port on the right side of the mask. Unscrew (counterclockwise) the fastening nut from the plug using OTS wrench. Remove the plug and store for possible future use (Figure 11 on page 12).
2. Loosen (counterclockwise) the captive fastening nut on the microphone and push-to-talk (PTT) module of the Buddy Phone. Allow enough space between the fastening nut and the base of the module to accept the lip of the mask.
3. Insert the microphone and PTT module into the mask's right communications port. The nickel microphone wires may need to be bent slightly to install.
4. Continue inserting the microphone and PTT module into the communications port. The lip of the mask should go over the base of the module and rest between the base and the fastening nut.
5. The fastening nut is then screwed down clockwise until tight against the mask. The Buddy Phone cable should be pointing towards the Buddy Phone above the right ear.
6. Once the microphone is inside the port, carefully position it within 1/4" of the right corner of the diver's lips. The port accepts either the ME-16R Hot-Mic or Super Mic.
7. Fully insert the upper right head strap of the mask into the strap retainer slot on the OTS-BUD-D2 so that the Buddy Phone will be positioned above the right ear. Stretching the strap will make it easier to slip into the slot.
8. Before donning the mask, position the Buddy Phone as far back as possible to allow for tightening of the mask straps. Once fitted, adjust the Buddy Phone over the right ear as needed.

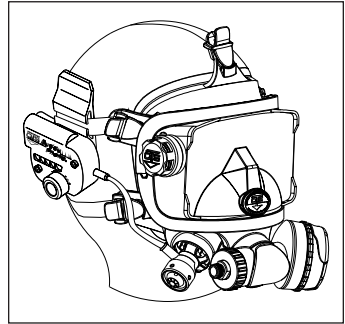


Figure 18: Stealth FFM
with Buddy Phone®

Note: In most cases of weak or bad communication, OTS has found that the microphone has been installed under the seal and toward the chin. The microphone needs to be clear of the seal and in the correct position for good, clear communications.

EM-OTS-2 INSTALLATION INSTRUCTIONS

Refer to Figure 19 and proceed as follows:

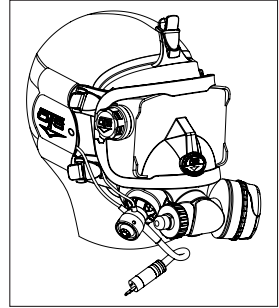


Figure 19: Stealth FFM with EM-OTS-2

1. Locate the communications port on the right side of the mask. Using the OTS Wrench, unscrew (counterclockwise) the fastening nut from the plug and remove. Remove the plug from inside and store for possible future use (Figure 11 on page 12).
2. Loosen (counterclockwise) the captive fastening nut on the microphone and push-to-talk (PTT) module of the earphone and microphone assembly. Allow enough the base of the module to accept the lip of the mask.
3. Insert the microphone and PTT module into the mask's right communications port. The nickel microphone wires may need to be bent slightly to install.
4. Continue inserting the microphone and PTT module into the communications port. The lip of the mask should go over the base of the module and rest between the base and the fastening nut.
5. The fastening nut is then turned clockwise until tight against the mask.
6. Once the microphone is inside the port, carefully position it within 1/4" of the right corner of the diver's lips. The port accepts either the ME-16R Hot-Mic or Super Mic.
7. The left earphone cable travels snug up the right side of the visor and over the top by tucking the wire into the groove between the mask and visor.
8. Insert the temple and jaw mask straps through the top and bottom slots of each earphone holder, respectively. The snaps face toward the front of the mask with the OTS logo on each earphone holder upright. Reassemble the mask straps.
9. Insert the earphone into the earphone holder (on each side) past the snaps with the cable positioned below the snap. Secure the snap.
10. The earphone cable should exit the holder below the snap and run parallel with the mask straps.

Note: In most cases of weak or bad communication, OTS has found that the microphone has been installed under the seal and toward the chin. The microphone needs to be clear of the seal and in the correct position for good, clear communications.

SPECIFICATIONS

- OTS Stealth Full-Face Mask is tested to a maximum diving depth of 50m according to EN 250:2000+A1:2006.
- OTS Stealth Full-Face Mask is designed for water temperatures below 10°C and is suitable for cold-water diving applications according to EN 250:2000+A1:2006.
- OTS Stealth Full-Face Mask is tested for diving applications with breathing air according to EN 12021.
- OTS Stealth Full-Face Mask has been tested according to the European standard EN 250:2000+A1:2006.

Material	Description
SILICONE	STEALTH SKIRT
GLASS FILLED ZYTEL®	MAJOR PLASTIC COMPONENTS
PLATINUM CURED SILICONE	SEAT, ONE-WAY VALVE, MASK
POLY CARBONATE	VISOR
EPDM	O-RING - CHRISTOLUBE MCG111
EPDM / NATURAL RUBBER BLEND	STRAP, MASK
NYLON	ONE-WAY VALVE SEAT
SILICONE	PURGE BUTTON
THERMOPLASTIC URETHANE	REGULATOR, SHROUD

Undersea Systems International, Inc.
dba
Ocean Technology Systems

LIMITED WARRANTY

The Stealth Full-Face Mask (Stealth FFM) is fully warranted against defects in materials and workmanship, including labor, for a period of two years from the time of purchase. Our obligation under this warranty is limited to the replacing of any part or parts which prove to our satisfaction to have been defective and which have not been misused or carelessly handled.

You must contact an official Ocean Technology Systems (OTS) Service Center or OTS directly to obtain service. If you elect to send the item/s to OTS, you must call and obtain an RMA number from our Repair department. The complete unit and/or damaged part shall be returned to our factory, transportation charges prepaid. We reserve the right to decline responsibility where repairs have been made or attempted by any party other than an OTS service factory trained center or properly trained personnel.

In no event shall OTS be liable for consequential damages related to our product/s.

OTS recommends that the Stealth Full-Face Mask and SRG-1 Regulator be maintained on an annual basis. Warranty registration is required. OTS will replace routine maintenance parts and make appropriate adjustments. Any parts requiring replacement due to excessive wear or damage are not covered in this offer. Customer will be notified of any additional charges for worn or damaged components. The customer is responsible for shipping charges to the factory. OTS will pay shipping limited to the continental United States via UPS Ground service or equivalent. Any other shipping requirements are the responsibility of the customer.

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