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FilterFalls		Skimmer	
Oasis BF1600 Feature	Parts List	Oasis PS3900 Features	Parts List
Spillway	Bottom Grate	Weir Width	Weir Door
16"	2-Filter Mats	6"	Trap Net
Pump Flow Range	Media Bag	Pump Flow Range	Matala Filter Mat
1,000 - 3,000 gph	1 1/4" Support Bar	1,000 - 3,900 gph	1 1/4" Support Bar
Match to Skimmer	Top Grate	Match to FilterFalls	Silicone
PS 3900	1 1/2" Bulkhead	BF1600	15 Screws
Dimensions	Silicone	Dimensions	15 Nuts
21 1/2"W x 19 1/2"D x 17 3/4"H	8 Screws	17 3/4"W x 19 1/2"D x 19 1/2"H	



Water Gardens

POND VOLUME

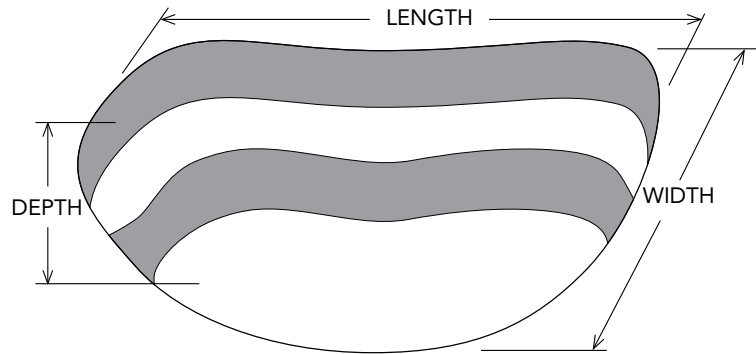
It is important to calculate the estimated water volume before you begin construction, and then re-calculate final water volume when your project is completed. Estimating water volume pre-construction is a step that is often skipped by many homeowners and contractors. This can prove to be a crucial mistake. Without having an estimated water volume you can not properly size the filtration components for your project. A water garden with undersized filtration can prove to be a maintenance nightmare.

Use the formula listed below to estimate water volume in gallons. Once you have done this, use the Product Specifications/Cross-Reference Guide on page 3 to determine the proper Skimmer, FilterFalls and pump size for your project. If you are in-between filter sizes it is always recommended to use the next biggest size. (Filtration is the one area that the "bigger is better" rule definitely applies.)

TO DETERMINE POND VOLUME

Multiply (in feet) the average length x the average width x the average depth to find cubic feet of pond volume.

Multiply cubic feet x 7.48 = gallons



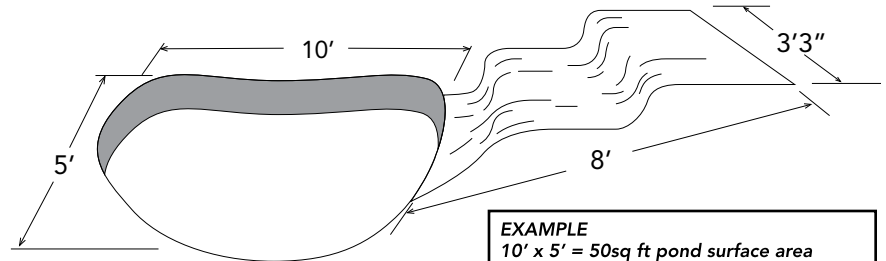
SQUARE FOOTAGE

When using any pond skimmer it is important to keep the surface area (in square feet) of the pond in mind. Upon start-up, the pump sends water from the bottom reservoir to the top of the waterfall and/or streambed. The water must then fill, from top to bottom, the waterfalls and streambed until it eventually re-enters the pond and the water levels equalize. During this filling process, the water level of the bottom reservoir is continually dropping. If the streambed is built improperly, or is built too big, the water level of the bottom reservoir could drop below the opening in the skimmer before the water levels equalize. This would result in the pump running dry and starving for water.

This situation can be easily avoided by using the formula provided to calculate the surface area of your pond. With that number, you can then determine the maximum surface area of waterfalls and streambed that your pond can accommodate.

SURFACE FOOTAGE

Multiply (in feet) the average length x the average width = total square feet of the pond surface area. Multiply the surface area of the pond x .05 = maximum surface area for falls



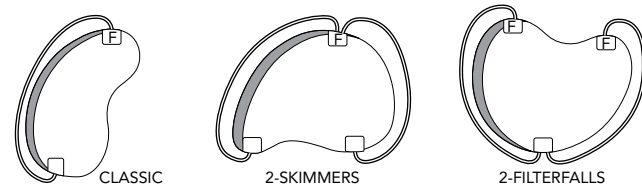
EXAMPLE
 $10' \times 5' = 50\text{sq ft pond surface area}$
 $50\text{sq ft} \times .05 = 25\text{sq ft stream surface area}$

PLACEMENT OF THE FILTERFALLS AND SKIMMER

Now that you have determined the size of the pond, waterfalls and filter system, it is time to determine the placement of the components.

Whenever possible it is best to position the Skimmer and FilterFalls directly across from each other at opposite ends of the pond. This setup creates a current that pulls surface debris into the Skimmer. If the Skimmer and FilterFalls are placed too close together, or the pond has an unusual shape, dead areas can occur. These dead areas can be eliminated with the use of multiple falls or multiple skimmers.

Below are a few examples of Skimmer and FilterFall combinations that can be used to combat situations like these.



Oasis Skimmer Installation

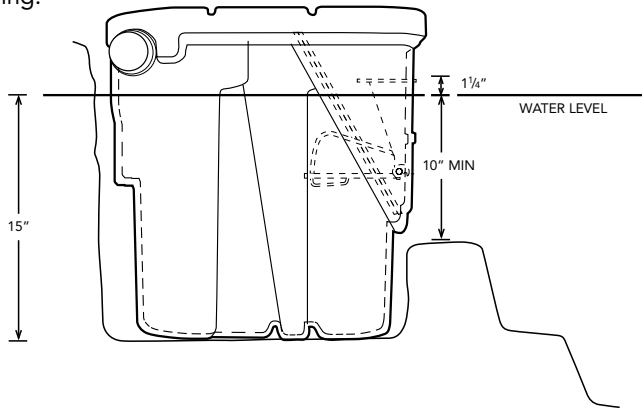
EXCAVATING AND SETTING THE SKIMMER (PS3900)

Prior to setting the skimmer you must first determine the surface level of the water in the pond. Once you have this number you can excavate for the Skimmer. The excavation should be a few inches wider and longer than the Skimmer body. The depth of excavation for the PS3900 should be 15" below water level. For your Oasis skimmer dig the hole depth 15" this will determine the approximate depth of the hole below water level. *Do not dig too deep.* The skimmer should be set on undisturbed earth if possible. In the case that you over-dig, be sure to compact the soil thoroughly to prevent settling. The bottom of the hole should be level side-to-side and front-to-back.

Place the skimmer enclosure into the excavated hole. Check the top of the enclosure to make sure that it is level front-to-back and side-to-side. Check where your pre-determined water level falls on the face of the skimmer enclosure. Water level should be 1 1/4" below the top of the weir door opening.

Make sure that any unexcavated soil that is left in front of the Skimmer is at least 10" below water level. This will ensure that there is enough room for the weir door to be installed and function properly.

Before you go any further into the Skimmer installation, it is a good idea to place a few stones inside the Skimmer enclosure to weigh it down and keep it from moving.



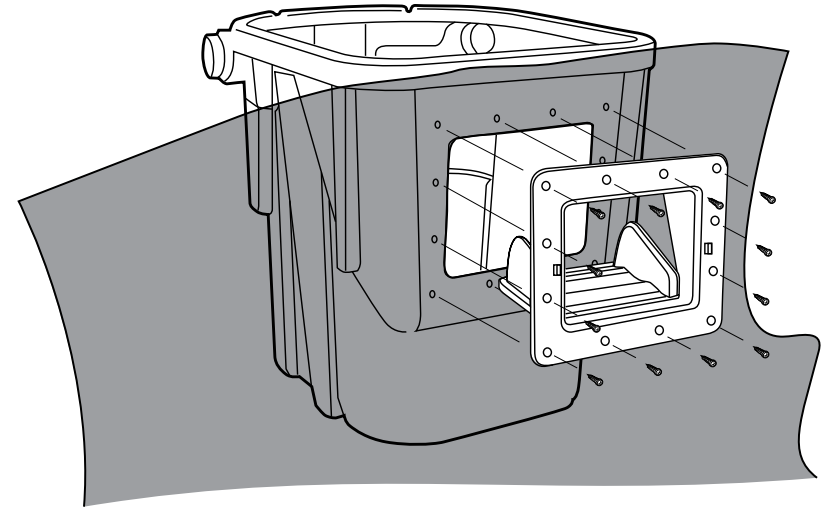
Prior to backfilling the enclosure, make sure the support bar is installed inside the skimmer. The support bar must be in place for the enclosure to retain its shape during the backfilling process. Loosely backfill the enclosure on all sides, lightly compacting as you go. Do not over-compact the soil! Aggressive compaction may deform the enclosure and cause components to fit improperly.

ATTACHING THE LINER

Hold the liner up against the face of the Skimmer, allowing a minimum of 2" to extend above the top of the enclosure. Leave some excess slack in the liner below the weir opening. This will help alleviate any future strain on the liner connection. Make sure that the front surface of the Skimmer, and the back side of the liner, are clean and free of debris. When you are satisfied with the position of the liner, clip it in place with the provided spring clips.

With a sharp razor knife, cut a hole in the liner for the weir door using the hole in the face of the skimmer as a guide.

When you are finished, remove the spring clips and pull the liner away from the face of the skimmer. Apply Atlantic's fish-safe silicone around the weir door opening on all four sides. Apply a consistent bead of Atlantic fish-safe silicone to the face of the Skimmer along the centerline of the pre-drilled bolt holes. Once you are finished, you can return the liner to its original position and replace the spring clips.

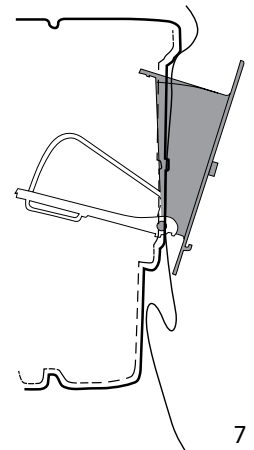
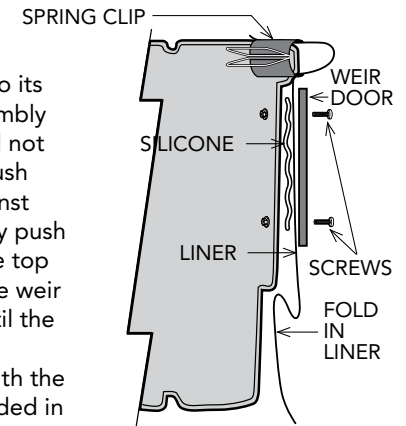


ATTACHING THE WEIR DOOR

Unlatch the weir door and lower the door to its fully open position. Insert the weir door assembly into the Skimmer opening. The weir door will not simply slip right into place. With one hand push the bottom of the weir door frame tight against the Skimmer face. With the other hand gently push down on the weir door latch until it clears the top of the opening. Once it does, simply push the weir door assembly into the Skimmer opening until the frame rests against the face of the enclosure.

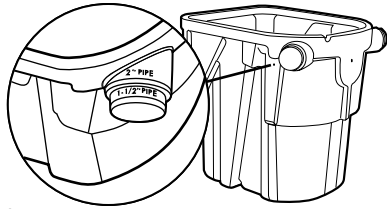
Line up the holes of the weir door frame with the holes in the Skimmer face. Use the nail (included in the install kit) to help line up the holes and pierce the liner in the top corners. Loosely fasten the top corners using two of the supplied 1/4-20 machine screws and serrated flange nuts. Next, install two screws in the bottom corners of the weir door frame. Once you have the weir door tacked at the corners you can install the rest of the screws. Do not fully tighten any screws until all of the screws have been installed.

Use your fingers to hold the flange nut and a hand held screwdriver to tighten the screws. The serrations on the flange nut will grab the plastic enclosure once it makes contact, eliminating the need to use a wrench. Use caution when tightening the screws. The screws need only be snug for the silicone to make a seal.



PLUMBING THE PS3900

The PS3900 Skimmer has pump discharge step fittings molded into each side of the skimmer enclosure. The step fittings are labeled for 1 ½" or 2" PVC pipe and have cut lines molded in for each size. Choose the step fitting on the side of the skimmer that will be best suited to exit based on this installation. Using a PVC saw or standard hack saw, remove the end of the step fitting (making sure to follow the molded cut line) for the size pipe used for this water feature. Once completed, push one end of the PVC supply line through the step fitting allowing approximately 10" of pipe to enter the skimmer enclosure.



It is recommended that you install a TR215CV Triton Check Valve between the pump and the supply line. This valve will prevent the FilterFalls from draining when the pump is off, which keeps the beneficial bacteria alive and any debris that the FilterFalls has collected from back flowing into your pond. Refer the Triton Check Valve installation instructions on page 10 for further details.

A drill point is provided on both sides of your Oasis Skimmer to show the proper location for the installation of an AF1000 Auto-fill valve (not included). See the Auto-fill installation instructions on page 12 for more information. There is a drill-point provided on the back of Oasis Skimmer to show the proper location and elevation for the installation of an overflow (not included). See the Overflow installation instructions on page 12 for more information.

Oasis FilterFalls Installation

BULKHEAD INSTALLATION (BF1600)

It is a good idea to install the bulkhead fitting and 1 ½" MTA (included) before setting the BF1600. If 2" flexible PVC is being used for the supply line, replacing the 1 ½" HA1550 bulkhead with an Atlantic 2" HA2000 bulkhead (not included) is recommended.

Remove the retaining nut and plastic friction washer, leaving the rubber gasket on the body of the bulkhead fitting. (Note: the retaining nut is reverse threads. Turn clockwise to loosen).

From the inside of the FilterFalls, insert the threaded end of the bulkhead into the hole on the back of the enclosure. This will sandwich the rubber gasket between the flange of the bulkhead and the inside wall of the enclosure. Slip the friction washer over the threaded end of the bulkhead on the outside of the enclosure and install the retaining nut. Tighten the retaining nut by hand and then finish off with ½ turn from a wrench. (Note: the retaining nut is reverse threads. Turn counterclockwise to tighten).

SETTING THE BF1600

It is always recommended that the FilterFalls be placed on undisturbed soil if possible. If the installation calls for the FilterFalls to be elevated above existing grade, it is critical to compact the area thoroughly. This will ensure that the FilterFalls will not settle out-of-level over time. The use of cinder blocks or

bricks under the falls to raise it up will help reduce the chance of settling.

The FilterFalls can be placed adjacent to the pond edge to create a single waterfall, or pulled away from the pond to create a streambed effect. Refer to the surface area recommendations on page 5 to ensure that the streambed is properly sized.

Once you have placed the unit, make sure it is level from side to side and check the level from front to back. FilterFalls should always be installed tilted slightly forward about ¼". This will ensure that water never leaks out over the back of the enclosure. When you are finished positioning the unit, it is a good idea to weigh it down with a few rocks to keep it in place while you backfill and make your liner connection. Do not completely backfill the FilterFalls until all of your plumbing connections are made and the liner has been attached.

LINER ATTACHMENT

Atlantic FilterFalls come equipped with a solid spillway, threaded inserts and a 'U' shaped wrap-around flange. This combination of features produces the best seal available on the market today.

Start by positioning the liner. Pull the liner up the face of the FilterFalls and drape a minimum of 6" of liner over the top of the enclosure. Use the provided spring clips to temporarily hold the liner in place (fig.1). Leave some excess slack in the liner below the spillway. This will help to alleviate any future strain on the liner connection. With the liner firmly in place, use a sharp razor knife to cut the spillway opening in the liner using the inside of the spillway as a guide (fig. 1).

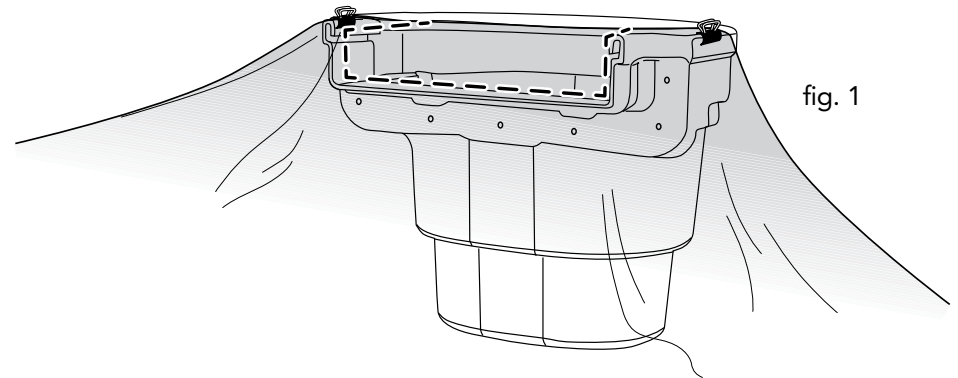


fig. 1

Remove the spring clips and pull the liner away from the face of the enclosure. Make sure that the front of the FilterFalls and the back side of the liner are clean and free of debris. Apply a consistent bead of Atlantic fish-safe silicone to the face of the FilterFalls along the center line of the threaded inserts (fig. 2).

Return the liner to the face of the FilterFalls and hold it in place by attaching the spring clips to the rolled lip on either side of the spillway (fig. 2).

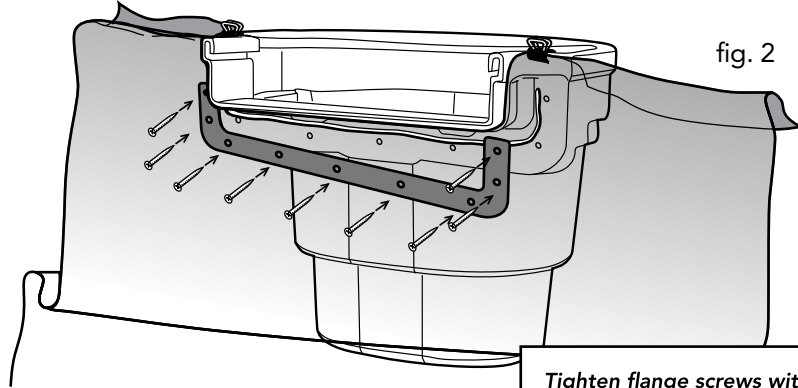


fig. 2

Attach the liner flange to the FilterFalls, starting with the center screw first, and then work out toward the sides of the spillway. It may be necessary to first pierce the liner with a nail or an awl before inserting the screw. Do not fully tighten any screws until all the screws have been installed. Once completed, trim away any excess liner as needed.

Tighten flange screws with a hand held screwdriver only. Over tightening the screws could strip out the inserts or crack the liner flange. The screws need only to be snug for the silicone to make a seal.

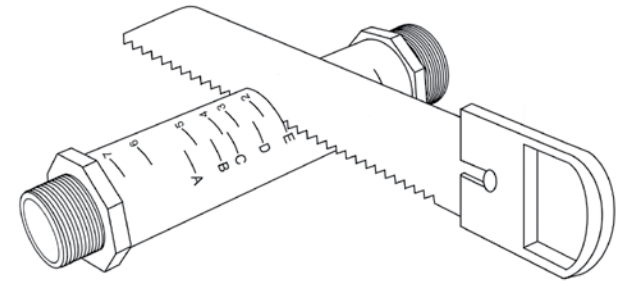
TRITON CHECK VALVE

Locate the model number of the TidalWave pump used for this installation on the chart. The 'perfect cut' reference mark is listed next to the pump. If the corresponding reference mark is a letter, then the 1-1/2" threaded end of the discharge pipe will be used. If the corresponding reference mark is a number, then the 2" threaded end of the discharge pipe will be used.

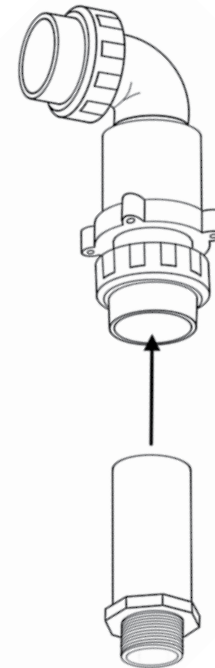
Discharge Pipe "Perfect-Cut" Reference Chart

TW1200	B
TW1900	B
TW2400	B
TW3700	A
SH1450	E
SH2050	E
SH3600	E
PAF20	3
PAF25	3
A05	3

Locate the correct reference mark for this installation on the discharge pipe. Using a hacksaw or PVC saw, cut the pipe at this mark being careful to make a clean, square cut. Discard the end of the discharge pipe that will not be used.



Use a small piece of sandpaper to smooth out the cut end of the discharge pipe. Clean the 2" socket fitting on the bottom of the check valve and the cut end of the discharge pipe with PVC cleaner/primer. Apply PVC glue and insert the discharge pipe into the 2" socket fitting. Hold the discharge pipe firmly in place for a few seconds, giving the glue time to set.



NOTE: If you have removed the 2" socket fitting from the bottom of the check valve prior to gluing the connection, make sure to slide the union nut onto the discharge pipe before gluing the socket fitting in place.

Attach the Triton Check Valve to the TidalWave pump, by threading the discharge pipe into the pump discharge.

NOTE: If you are installing a TW2 series pump, you will need to use the threaded transition coupling that is supplied with the pump to make this connection. If you are installing a SH series pump, you will need to use the threaded transition elbow that is supplied with the pump to make this connection.

Place the TidalWave pump with installed Triton Check Valve into the PS3900 Skimmer. Connect the outlet fitting of the Triton Check Valve to the PVC supply line that feeds the waterfall using PVC glue and Cleaner. For your convenience; 2" and 1-1/2" outlet fittings are supplied with the Triton Check Valve.

NOTE: If you have removed the outlet fitting from the check valve prior to gluing the connection, make sure to slide the union nut onto the supply pipe before gluing the socket fitting in place.

Complete installation by tightening the union nuts on the Triton check valve. **HAND TIGHTEN ONLY. DO NOT USE CHANNEL LOCKS TO TIGHTEN THE UNION NUTS.**

Skimmer Accessories

AF1000 AUTO-FILL KIT

Labeled drill points have been provided for the proper Auto-fill location on either side of the Oasis Skimmer. See the diagram. It is a good idea to completely install the pump, check valve assembly, and discharge hose before you drill for the Auto-fill. This will help you determine the best side of the Skimmer to place the Auto-fill so that it has proper clearance on all sides.

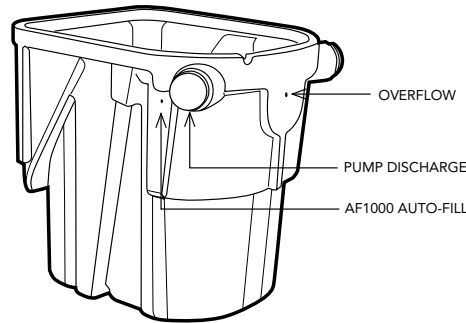
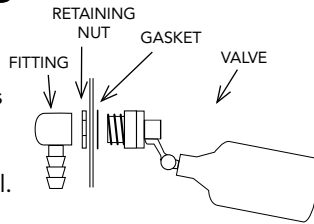
Once you have determined the location of the Auto-fill, drill a 7/8" hole using a spade bit or hole saw. Insert the Auto-fill making sure the gasket is on the inside of the skimmer and the plastic retaining nut is on the outside. Tighten the retaining nut until snug. (Do not over-tighten the retaining nut.)

Fittings to connect the Auto-Fill to a garden hose, 1/2" irrigation line, and 1/2" Sch40 are included in the kit. Wrap the 1/2" male threads on the Auto-fill with thread sealant and install the fitting of your choice. Once water is supplied to the Auto-fill it will maintain the set water level by automatically adding water when the level drops. This level can be adjusted by loosening the wing nut and raising and lowering the height of the auto-fill float. Use the water line mark on the weir door frame to help establish proper water level.

SKIMMER OVERFLOW

A drill-point has been provided on the back of the Oasis skimmer to show the proper location and elevation to install an Atlantic HA2000 bulkhead fitting for the overflow (not included). See diagram above for drill-point location. This combination will position the bottom of the overflow pipe approximately 1" above recommended water level. (Note: If a HA2000 bulkhead is not being used, the center point for the hole will have to be recalculated on site.)

Drill a 3" hole and install the bulkhead following the instructions on page 8. Install a 2" MTA and connect the overflow pipe.



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Oasis Filterfall and Skimmer



Instruction
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