

# User's Manual

# SilentStream®



Below Versions are Available

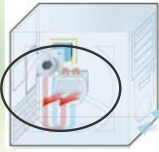
中文



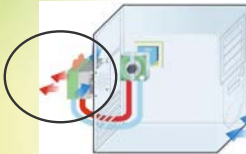
Global WIN GlobalWIN Technology Co., Ltd.

[www.globalwin.com.tw](http://www.globalwin.com.tw)

## == Important Pre-Installation Advice ==



*Silent Stream*<sup>®</sup> *Quick* ( Radiator placed inside the case )



*Silent Stream*<sup>®</sup> *Pro* ( Radiator placed outside the case )

There are two kinds of *Silent Stream*<sup>®</sup> installations:

*Silent Stream*<sup>®</sup> *Quick* and *Silent Stream*<sup>®</sup> *Pro*

The installing location of radiator makes the only difference between two.

If you are an experienced assembler whom product performance is the major concern, please go for *Silent Stream*<sup>®</sup> *Pro* installation to place the radiator outside the case for drawing FRESH AIR (around 25°C), which is about 10°C lower than the warm air inside the case, to cool the radiator.

*Silent Stream*<sup>®</sup> *Pro* can perform 8-11°C better than Box CPU cooler ( Please refer to Chapter 5 for details: Page 17 ~ 25 )

If you are the user who are interested in trying water cooling with efficient performance but don't want to bother yourself with complicated installation steps. Please go for *Silent Stream*<sup>®</sup> *Quick* , which will take you only 80 seconds for installations. ( Please refer to Chapter 3 for details: Page 8-15 )

**NOTE** : The bigger the radiator ventilation opening on the case is, the better the *Silent Stream*<sup>®</sup> *Quick* can perform. Please refer to figure <3-3-1>:

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# <1> Contents of package

- 1. *SilentStream*® module with pre-filled water and antifreeze fluid ..... 
- 2. Heatsink clips for mounting on AMD K7 CPU ..... 
- 3. Clip kit for Intel P4 Socket 478 CPU..... 
- 4. 20 CC syringe for water filling (SY001) ..... 
- 5. 4 pin to 3 pin adaptor (CBA012) ..... 
- 6. 3 pin extension cable (CBA013) ..... 
- 7. 3 pin Y cable (CBA015) ..... 
- 8. GW101 / 2g thermal grease ..... 
- 9. Override power plug 20 pin (PG001) for *SilentStream*® Pro ..... 

# <1> Contents of package

10. Override power switch (SW001) for *SilentStream*<sup>®</sup> Pro 

11. 3\*75mm screws and nuts 5pcs each for *SilentStream*<sup>®</sup> Pro ..... 

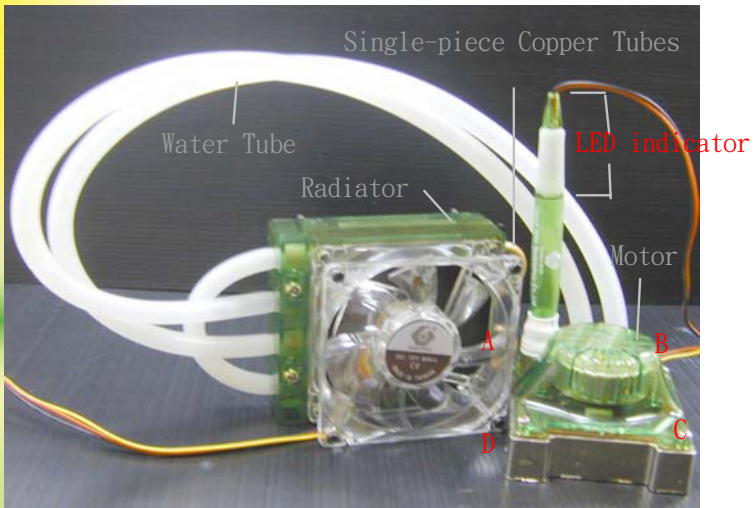
12. Spacers for screws x 5pcs for *SilentStream*<sup>®</sup> Pro ..... 

13. External tubing fixation (RF001 ) for *SilentStream*<sup>®</sup> Pro ..... 

14. Printed Manual : Available in Chinese and English versions

15. CD-R Manual : Available in Chinese , English, French and German versions

## Components and Features of *SilentStream*<sup>®</sup> < Figure 1 >





## <2> Pre-Mounting Inspections

- After unpacking *SilentStream*<sup>®</sup>, if the package is wet and the cause appears to be leaks from *SilentStream*<sup>®</sup>, please immediately return the product to where it was purchased for replacement.
- Please use a cotton cloth to wipe the following parts and make sure there is no leak before proceeding to mount the unit.

<2-A>



Joint between Water Block and water tubes

<2-B>



Entire water tubes

<2-C>



Joint between the radiator and water tubes

<2-D>



The U-shaped water tube outside the radiator

<2-E>



Joint between the water filling tube and Water Block

<2-F>



Capping of LED top cover.

## < 3 > *SilentStream*® Quick Mounting Instructions

### <3-1> Water Block Installation

#### < 3-1-1 > Mounting on AMD K7 CPU

<3-1-1-A>



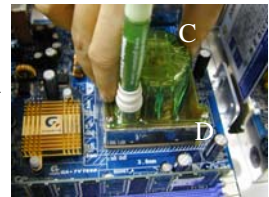
Take out the AMD K7 heatsink clip and *SilentStream*®  
(Make sure to go over the pre-mounting inspections again)

<3-1-1-B>



Tear off the plastic protection tape on the bottom of the Water Block.

<3-1-1-C>

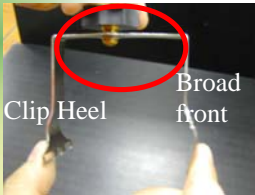


Place Water Block flatly on top of the CPU, with CD side (see Figure 1, Page 6 ) facing the convex side of the plastic Socket base.



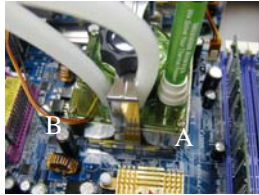
## < 3 > *SilentStream*® Quick Mounting Instructions

<3-1-1-D>



First put in the plastic screws of the AMD K7 heatsink clip and lock them halfway.

<3-1-1-E>



Place the AMD K7 heatsink clip with its heel facing the AB side where the water tubes are located (see Figure 1, Page 6) and clamp it on the Socket tabs.

<3-1-1-F>



Place the broadside of the AMD K7 clip on the concave CD side (see Figure 1, Page 6) and clamp it on the tabs on the Socket convex side.

<3-1-1-G>



After the clip locks into the tabs on the bottom of the Socket, secure the screws until they cannot be driven further.

The mounting of the Water Block is complete.

### Note:

For instructions of radiator mounting, see <3-2> Pages 12 - 13 for details.

## < 3 > *SilentStream*® Quick Mounting Instructions

### < 3-1-2 > Dismounting Water Block from AMD K7 CPU

<3-1-2-A>



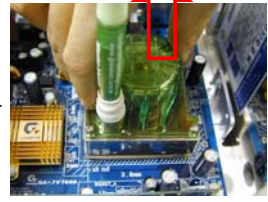
Turn the plastic screws in the opposite directions.

<3-1-2-B>



Unclamp the clip from tabs on both sides to remove the clip .

<3-1-2-C>



Remove the Water Block.

### < 3-1-3 > Mounting on Intel P4 CPU

<3-1-3-A>



Get the P4 clip kit, Philips screwdriver, and *SilentStream*® ready.

(Make sure to go over the pre-mounting inspections again)

<3-1-3-B>



With the concave side of the Clip support facing up, fixate the support on both sides using screws.

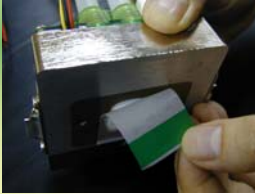
<3-1-3-C>



After both clip supports are fixated, get the mounting clips ready.

## < 3 > *SilentStream*® Quick Mounting Instructions

<3-1-3-D>



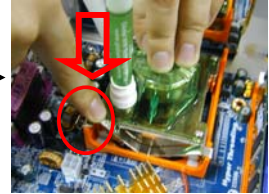
Tear off the plastic protection tape on the bottom of the Water Block.

<3-1-3-E>



Place the Water Block flatly in the CPU retention module with the short side clip clamped on first.

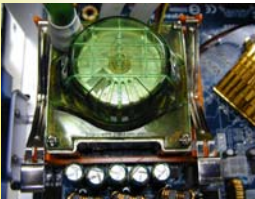
<3-1-3-F>



Then press on the long side clip (directly press down) . One side at a time.

(Keep the Water Block balanced during mounting).

<3-1-3-G>



The mounting of the Water Block is complete.

### Note :

For instructions of radiator mounting, see <3-2>, Pages 12- 13 for details

## < 3 > *SilentStream*® Quick Mounting Instructions

### < 3-1-4 > Dismounting Water Block from Intel P4 CPU

<3-1-4-A>



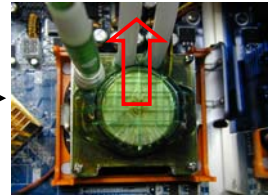
Gently press and hold stable the Water Block. Use the slotted screwdriver to press down on the concave side of the long clip and bend it outwards.

<3-1-4-B>



Take off the short side clip.

<3-1-4-C>



After taking off clips on both sides, remove the Water Block.

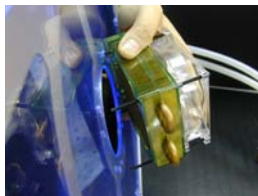
### <3-2> Radiator Mounting Instructions

<3-2-A>



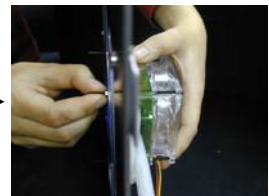
Unscrew the four nuts on the radiator.

<3-2-B>



Mount the radiator on either the side panel or the back panel, wherever the 80mm case fan is located.

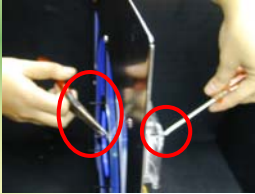
<3-2-C>



Put back the four nuts to secure the radiator.

## < 3 > *SilentStream*® Quick Mounting Instructions

<3-2-D>



Use pliers to hold the nuts and turn the fan screws using the Phillips screwdriver. Make sure the screws are secured to eliminate vibrational noise.

<3-2-E>



Plug the Y cable of the motor and LED indicator (CBA015) into the fan power outlet on the mainboard.

<3-2-F>



Connect the radiator's fan plug to the power (it can either be the mainboard's fan plug or the 4 pin connector on the PSU.)

<3-2-G>



Put the side panel back.

<3-2-H>



Side view of unit in operation.

<3-2-I>



Front view of the unit in operation.

### **A thoughtful suggestion:**

We kindly suggest you to plug both the motor/LED indicator and the radiator fan into the fan plug on the mainboard to enable monitoring the operation of the motor and the fan.



## < 3 > *SilentStream*<sup>®</sup> Quick Mounting Instructions

### <3-3 > Cautions

#### <3-3-1> Size of Radiator Ventilation Opening

★ Advice for *SilentStream*<sup>®</sup> Quick installation user only

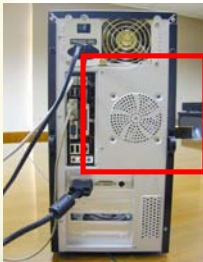


Figure A

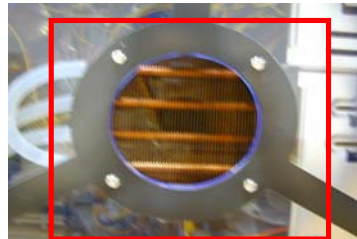


Figure B

If you are a *SilentStream*<sup>®</sup> Quick user , to obtain better performance , we suggest having the radiator ventilation opening as shown in Figure B, a complete type. In the case shown in Figure A, 30% to 80% of the heat will be blocked and bounced back, undermining the heat dissipation efficiency.

See the test result below for comparison: CPU : P4 Socket 478 , 2.8GHz

<i>SilentStream</i> <sup>®</sup>	Thermal Paste	Temperature TJ/Ta/Td	(Q) Watts	Thermal Resistance Rja(C/W)
<i>SilentStream</i> <sup>®</sup> Quick Figure A Test Result	GW101	56.1 / 25 / 31.1	68.4	0.455
<i>SilentStream</i> <sup>®</sup> Quick Figure B Test Result	GW101	48.8 / 25 / 23.8	68.4	0.348



## < 3 > *SilentStream*® Quick Mounting Instructions

### <3-3-2> PC's CMOS Setup

Users of *SilentStream*® should activate the overheating alert in the CMOS Setup, which issues warnings when the CPU's temperature exceeds 60°C and prevents potential damages to the CPU resulting from breakdown of *SilentStream*®.

1. Turn on the PC's power and press DEL to enter the CMOS Setup.
2. Choose "PC Health status".
3. Set CPU Warning Temperature to 60°C/140°F.

Set CPU Fan Fail Warning to "Enabled".

4. Press "ESC" to exit and press "Save & Exit Setup" to save the settings and exit the CMOS Setup. Then proceed to log into the Operating System (OS).

### <3-3-3> Environmental Temperatures when the product is operating or idle

Antifreeze fluid is added in the water of *SilentStream*® to prevent potential freezing during product shipping. Therefore, there is essentially no limitation on the environmental temperatures when the product is operating or idle.

However, if the users opt for the *SilentStream*® **Pro** mounting scheme described in Chapter 5, in which no antifreeze fluid is added to the water, the following limitations impose:

# Environmental temperature when idle: lowest temperature no less than 5°C.

highest temperature : depending on the CPU's maximum rating

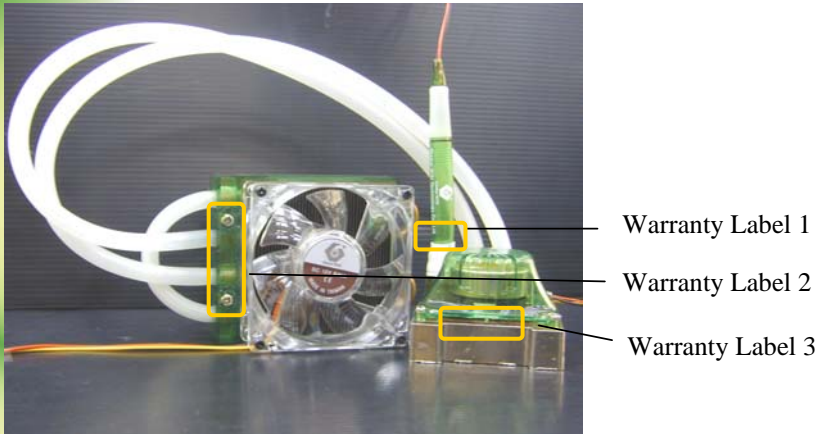
# Environmental temperature when in operation: lowest temperature no less than 5°C.

highest temperature : depending on the CPU's maximum rating

## <4> Operations not covered by the limited warranty

### <4-1> Removal of Warranty Labels :

Tearing the warranty labels in the following three places



### <4-2> Manmade scratch / cut / piercing of water tubes

<4-2-A>



<4-2-B>



<4-2-C>



<4-3> Mistake made in water filling: water spilt over the unit.

<4-4> Failure to keep water above the required minimum level.

<4-5> Operating the product without following the instructions.

## < 5 > Mounting Instructions of *SilentStream*<sup>®</sup> Pro (for professional users)

### WARNING

The design of *SilentStream*<sup>®</sup> holds several patents, including the failsafe design of water tube connection. For the sake of clarification of user/seller responsibilities, however, no leakage warranty is provided for any parts where the warranty labels are removed. Therefore, we ask for the understanding of users who have removed the warranty label 2 to complete the *SilentStream*<sup>®</sup> Pro mounting. Nonetheless, because of the unique patented design, as long as users abide by the following mounting instructions, no abnormal operation should occur and no leak should happen to where the warranty label 2 is located. Also, as long as the warranty labels 1 and 3 remain intact, the leakage warranty for those two parts still valid.

Environmental temperatures when in operation or idle for *SilentStream*<sup>®</sup> Pro: Please see Page 15 < 3-3-3 >

### <5-1> Dismounting Instructions

<5-1-A>



Take out  
*SilentStream*<sup>®</sup>

<5-1-B>



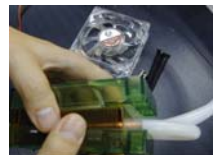
Remove the  
warranty label 2  
on the radiator.

<5-1-C>



Remove all the  
six screws on  
the cover.

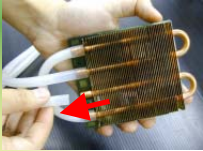
<5-1-D>



Take off the fan  
and open the  
cover.

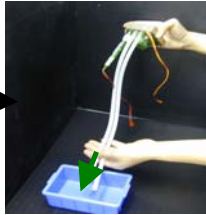
## < 5 > Mounting Instructions of *SilentStream*® Pro (for professional users)

<5-1-E>



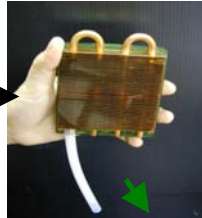
Pull out the two central water tubes.

<5-1-F>



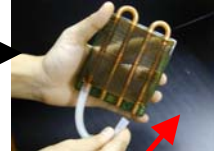
Drain the Water Block and its water tubes.

<5-1-G>



Pull out the U-shaped tube and drain the radiator and its copper tubes.

<5-1-H>



Make sure there is no liquid remaining in *SilentStream*® and insert the U-shaped tube back.

<5-1-I>



Assemble the external tubing fixation rack ( RF001 )

<5-1-J>



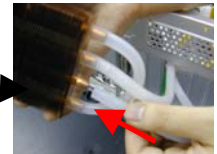
First put the fan plug through the external tubing fixation rack ( RF001 ) and connect it to the CBA013 (3 pin extension cable) inside the case.

<5-1-K>



Place water block with tubes inside the case.  
Then put the water tube out of the case through the external tubing fixation rack ( RF001 ).

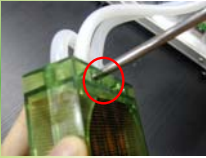
<5-1-L>



Take out the radiator and reconnect the water tube to it. Make sure the water tube end makes contact with the radiator copper fin .

## < 5 > Mounting Instructions of *SilentStream*<sup>®</sup> Pro (for professional users)

<5-1-M>



Put back the radiator cover and lock it securely with screws to prevent leaking.

<5-1-N>



Start filling water from outside the unit. Please follow instructions in Chapter <5-2> ( Page 20 – 25 )

Please thoroughly go over the pre-mounting inspections described in Chapter 2 ( Page 7 )

Water Block Installation . Please refer to Chapter 3 ( Page 8 - 15 )

<5-1-O>



Use four 3\*75mm screws to mount the radiator to the fan. And install the white screw spacers at the four corners of the fan. (Note that it should be the fan touching against the back panel wall, not the radiator. Check mounting accordingly.)

<5-1-P>



Inside the case, put on the four copper nuts, make sure the screws are secured to eliminate noise caused by vibration.

<5-1-Q>



Connect the power of motor/LED indicator and the radiator fan.

<5-1-R>



Put back the side panel and turn on the unit for operation.



*SilentStream*<sup>®</sup> Pro : The fan blows air to cool the radiator, not sucking in the air.



< 5 > *Mounting Instructions of SilentStream® Pro (for professional users)*

**<5-2> Water Filling Instructions (Distilled Water is recommended)**

Please precisely follow the steps labeled by A- B- C- D below.

**== A : Water filling ==**

<A-1>



Unplug Y cable (CBA015) and locate the motor plug for water pumping later

Open the top cover of LED indicator

<A-2>



Fill the syringe with water.

<A-3>



Fill the water to the maximum level. Do not top off or overfill.



## < 5 > Mounting Instructions of *SilentStream*® Pro (for professional users)

### == B : Motor Power Connection ==

(Choose one of the following connections according to your PC specifications)

#### <B-1> Assembled new/old systems, equipped with a functional cooler

- (1) Turn the unit on.
- (2) Fill water from outside the unit , installation can only operate after water filling is complete

➔ Either the 4pin connector on PSU or the 3pin fan plug on the mainboard can be connected for power to pump water.

---

#### (B-1-1) Use power from PSU

★ PSU + CBA012 + SW001 + *SilentStream*® motor plug

##### <B-1-1-A>



Keep the unit power on  
Open the Side Panel  
Take the 4 pin plug on PSU.

##### <B-1-1-B>



Connect it to the CBA012 ( 4 pin to 3 pin adapter )

##### <B-1-1-C>



Connect the CBA012 ( 2 pin plug ) to the override power switch SW001.

##### <B-1-1-D>



Connect the other end of override power switch to the motor to provide the water pumping power.

## < 5 > Mounting Instructions of *SilentStream*<sup>®</sup> Pro (for professional users)

**(B-1-2) Use the 3pin fan plug on mainboard**

★ Mainboard fan header + CBA013 + SW001 + *SilentStream*<sup>®</sup> motor plug

<B-1-2-A>



Keep the unit power on  
Open the Side Panel  
Take the 3pin plug on mainboard.

<B-1-2-B>



Connect it to the CBA013 (3 pin extension cable.)

<B-1-2-C>



Connect the 2 pin plug from CBA013 to the override power switch SW001.

<B-1-2-D>



The other end of the override power switch connects to the motor to provide the water pumping power

## < 5 > Mounting Instructions of *SilentStream*<sup>®</sup> Pro (for professional users)

### <B-2> Assembled New / old systems with no or broken cooler

➡ In this case, use the power from PSU to pump water and the unit should be turned off

★ PSU + PG001 + CBA012 + SW001 + *SilentStream*<sup>®</sup> motor plug

<B-2-A>



Keep the unit power off  
Open the Side Panel

Unplug the 20pin plug and all other power cable plugs (hard drive disk/CD-ROM, etc.) on PSU.

<B-2-B>



Connect the enclosed 20pin override plug PG001 to PSU 20 pin plug

<B-2-C>



Locate the 4pin connector from PSU and plug it into CBA012 (the 4 pin to 3 pin adapter)

<B-2-D>



Connect the 2 pin plug from CBA012 to the override power switch.

<B-2-E>



Connect the other end of the override power switch to the motor to provide the water pumping power.

## < 5 > Mounting Instructions of *SilentStream*® Pro (for professional users)

### == C : Launch Water Pumping ==



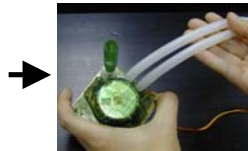
Please pump water from case outside to prevent any damage that might cause to the unit due to water spilt from mistake made in water filling

< C-1 >



Raise Point A and turn on the power. Keep filling water until the water level stays stable at maximum level marked on the LED indicator tube

< C-2 >



Turn off the power and check if there are any bubbles in the water tubes.

< C-3 >



Bubbles found

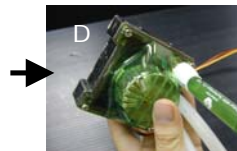
From our experience, after water filling, most of the bubbles will gather around Point B. Therefore, sequentially raising Points C, D, and A should be able to remove the bubbles.

< C-4 >



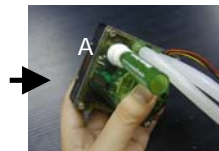
Keep the power on and lift Point C to round up the bubbles there.

< C-5 >



Keep the power on and lift Point D to round up the bubbles there.

< C-6 >



Keep power on and lift Point A to let the bubbles escape through the water filling tube.

➔ **After removing the bubbles, remember to refill water (do not exceed the maximum level).**

➔ **Repeat steps <C-4> to < C-6 > until all the bubbles are removed.**

## < 5 > Mounting Instructions of *SilentStream*® Pro (for professional users)

### == D : Complete Water Pumping ==

<D-1>



Turn off the power and make sure no more bubbles exist in water tubes.

<D-2>



Look into the water filling tube and you should see clear water with no bubbles.

<D-3>



Lock the LED top cover securely to prevent leaks.

<D-4>



Wipe the top cover.

<D-5>



Flip the water filling tube upside down and make sure it does not leak.

<D-6>



Use Y cable (CBA015) to combine Motor and LED indicator Plugs into one

Then go for Water Block installation

Please refer to Chapter 3

( Page 8-15 )

**\*\* At this stage, the water level should be at the maximum mark.**

## <6> Q & A

**Q1 : What does the cooling liquid compose of *SilentStream* ?**

A1 : The cooling liquid is composed of 70% water and 30% antifreeze fluid.

The water contained in *SilentStream* may become frozen at low temperatures during shipping. The volume of the frozen water is 10% more than the original and is likely to burst the water tubes. The water tubes will have leaks at normal operating temperatures. Therefore, the antifreeze liquid is thoughtfully added to ensure no freezing happens during shipping and the products are ready to install upon arrival.

While the antifreeze liquid can prevent the water from freezing, it reduces the unit's cooling capability. For professional users to whom product performance is the major concern, it is suggested to employ the Professional version installation (Chapter 5) for an enjoyable DIY experience and the ensuing satisfaction.

**Q2 : What kind of liquid should be used to replenish the original *SilentStream* liquid?**

A2 : General tap water is good enough for replenishment, since the Water Block has double anti-rust protection. However, in order to have better cooling capability and a longer product lifetime, distilled water is suggested.

Mineral water is not recommended because it may produce sediments or accelerate rusting.

In addition, Silicon Oil is not suitable for this product because of its high viscosity and poor thermal conductivity.

### Tip:

In general, tap water contains chlorine which will react with metals and produce rust. Using distilled water (does not contain chlorine) can therefore extend the lifetime of *SilentStream*.



## <6> Q&A

### Q3 : How much water can *SilentStream*<sup>®</sup> contain?

A3 : The inner volume of *SilentStream*<sup>®</sup> is 50 C.C. For experienced users who apply *SilentStream*<sup>®</sup> **Pro** Installation method should add 50 C.C. of water for the first time. Make necessary replenishments afterwards. The amount of water added should not exceed the highest level and the water level should be kept above the minimum line.

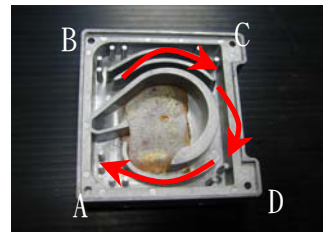
### Q4 : What is the flow rate of *SilentStream*<sup>®</sup> per hour?

A4 : *SilentStream*<sup>®</sup> cycles its liquid over 10.6 times per minute, with a flow rate of approximately 32 liters per hour.

### Q5: When adding water to *SilentStream*<sup>®</sup> **Pro** , how to remove the bubbles that are generated in this kind of installation ?

A5 : Bubbles tend to float toward the top and therefore can be removed by following Step C in Chapter 5-2 (page 20-25). Move the Water Block by the order of points C ⇒ D ⇒ A to steer the bubbles along the water flow. Use power override to turn off the power and all the small bubbles will merge into large bubbles. Then turn on the power to expel the bubbles. Repeat the above process for about 2 minutes and it should be able to remove all the bubbles. (The above process must be conducted outside the box. If the bubbles are not completely removed, the dite remaining bubbles won't affect the operation of this product.)

<6-1>



## <6> Q&A

### **Q6 : How do the bubbles affect the product performance ?**

A6 : The bubbles will occupy extra volume in water and reduce the cooling capability.

### **Q7 : How often should water be added to *SilentStream*™ ?**

A7: It depends on the categories and levels of CPU. The suggested periods are:

- a. AMD K7: Check water level every week.
- b. Intel P4: Check water level every two weeks.
- c. Or occasionally enter CMOS Setup to check Fan Speed. The normal reading should be between 3200~4000RPM. If the reading exceeds (including) 4000RPM, please check the water level and make sure the product is in normal operation.

### **Q8 : Can any dyes be added to color the water?**

A8 : It is not advised to add dyes to color the water for the following reasons:

2. Dyes cannot enhance cooling. On the contrary, they can only make the cooling less efficient.
3. Certain dye ingredients are caustic, which may cause structural damage and reduce product lifetime.
4. Dyes may stay in water tubes and obscure water level checks .

## <6> Q&A

**Q9 : What are the water tubes made of?**

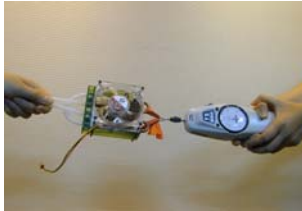
A9 : *SilentStream*<sup>®</sup> uses high quality silica tubes, which are fireproof and exhibit excellent ductility and strength.

<6-2>



<Resistant to high temperatures>

<6-3>



<Patented design: Screwless tube connection.>



**Q10 : What is ( and can the mainboard supply) the total power consumed by the motor and the LED indicator altogether?**

A10 : The total current used by the motor and LED indicator is 0.46 A, which can be supplied by any fan plugs on the main boards. For older models, however, please check instructions on the main boards for the correct rating limits to avoid overloading the main boards.

## <6> Q&A

### Q11 : How effective *SilentStream*® is in its cooling capability?

A11 : The effectiveness depends on how the radiator is installed. With *SilentStream*® *Pro* installation, it can be 8-11 degrees cooler than the boxed cooler (when the CPU is at full-load operation).

See the following table for the test result:

CPU : P4 Socket 478 , 2.8GHz

<i>SilentStream</i> ®	Thermal Pad	Temperature TJ/Ta/Td	( Q ) Watts	Thermal Resistance Rja(C/W)
Intel box cooler	AF517-15B	55 / 25 / 30	68.4	0.439
<i>SilentStream</i> ® <i>Pro</i>	GW101	44.2 / 25 / 19.2	68.4	0.281
<i>SilentStream</i> ® <i>Quick</i> Type B Installation ( Page 14 )	GW101	48.8 / 25 / 23.8	68.4	0.348

CPU : AMD Athlon XP3000+ , 2.167GHz

<i>SilentStream</i> ®	Thermal Pad	Temperature TJ/Ta/Td	( Q ) Watts	Thermal Resistance Rja(C/W)
AMD box cooler	GW103	52.2 / 25 / 27.2	74.3	0.366
<i>SilentStream</i> ® <i>Pro</i>	GW103	44.5 / 25 / 19.5	74.3	0.263
<i>SilentStream</i> ® <i>Quick</i> Type B Installation ( Page 14 )	GW103	48.6 / 25 / 23.6	74.3	0.318

## <6> Q&A

**Q12 : Why is *SilentStream*® so good?**

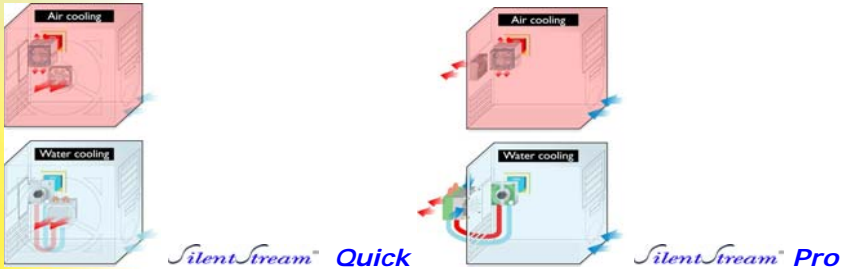
A12 :

12-1 The world's smallest water cooler:

It saves a lot of space for consumers whose space usage is a major concern.

12-2 Effective cooling:

The temperature inside the case can be significantly lowered. Since the heat is transferred directly to the water and then dissipated by circulation, nearly no heat remains in the case. Compared to units using air cooling or built-in radiators, this special design is more effective in lowering the temperature inside the case.



( Radiator placed inside the case ) ( Radiator placed outside the case )

12-3 No need to add water and it's ready to install (except for *SilentStream*® **Pro** : Professional Installation Version).

12-4 User-friendly clips design :

The patented design of the K7/P4 clips enables an easy and quick installation.

## <6> Q&A

### 12-5 Fits for any kind of cases:

No modification is required, for installation on any case with an 80mm fan opening.

12-5---1 The Water Block replaces the CPU cooler .

12-5---2 The radiator replaces the 80mm case fan.

### 12-6 Easy to replenish water:

The patented LED water level indicator conveniently marks the upper/lower level. The enclosed syringe makes adding water even easier.

### 12-7 Patented design of screwless water tube connections:

The patented design of screwless connection simplifies the assembling with no screws required. The operation should be perfectly normal and have no leaking problem as long as no artificial disassembling or alteration is conducted.

### 12-8 A 10-day trial period is available:

If a product exhibits functional defects (non-operating fan, stalled motor, non-working LED) or leaking, it can be returned within 10 days of purchase to receive a replacement. Note that the original package and contents such as the accessories and enclosed documents should be returned along with the product.

Please contact Global WIN, before returning a product, by sending an e-mail to [info@globalwin.com.tw](mailto:info@globalwin.com.tw). Then ship it back with postage paid or take it in person to the location where the product is purchased for a replacement.

### 12-9 Limited one-year warranty:

The limited warranty period for the product extends for one year from the date of purchase.(Please refer to Q14 for more details: Page 34)



## <6> Q&A

### Q13 : Is it necessary to replace the thermal pads with thermal grease?

A13 : Upon being manufactured, *SilentStream*<sup>®</sup> already includes the GW103 thermal pads on the bottom of the Water Block. The GW103 is made of silica, which has a thermal conductivity of 5.1/W/m/°C and provides better thermal conductivity than ordinary thermal pastes. Therefore, it is not advised to change the thermal pads coming with. In addition, one pack of GW101 (2 g) thermal paste is included in the package that comes along with *SilentStream*<sup>®</sup>, if the customers intend to reinstall the unit.

== Steps to change thermal pads to thermal paste for reinstallation ==

13-1 Use Naphtha or alcohol to completely wipe off the remaining GW103 left by the Water Block.

13-2 Wipe off the GW103 around the CPU.

13-3 Apply (by hand or using a cotton swab) GW101 on the CPU DIE and spread it as uniform as possible. Note that it is not necessary to use much thermal paste, as long as it is spread uniformly.

<6-4>



<6-5>



## <6> Q&A

### Q14 : What is covered by the limited warranty and how to receive the service?

A14 : The limited warranty is valid for one year from the date of purchase. For any failure during this period, please first contact the retailers, the computer assemblers, or the distributors. (The warranty is only for the repairs to *SilentStream*® ) The warranty does not cover damages that are caused by misuse, electricity, accident, abnormal operation, alteration, incorrect installation, or inappropriate test.

### Q15: Other information

A15 : Please visit [www.globalwin.com.tw](http://www.globalwin.com.tw) for updates on the Q&A information. If the questions you have are not listed in the Q&A section, please send an e-mail to [info@globalwin.com.tw](mailto:info@globalwin.com.tw) and our dedicated representatives will promptly assist you with your requests. In addition, we cordially welcome your feedback and suggestions after using our products.

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