

From oenabler@netcom.com Ukn Jun 24 13:37:00 1994
Return-Path: <oenabler@netcom.com>
Received: from netcom.com by astro.ocis.temple.edu (5.61/25)
id AA11882; Fri, 24 Jun 94 13:37:02 -0400
Received: by netcom.com (8.6.8.1/SMI-4.1/Netcom)
id KAA16086; Fri, 24 Jun 1994 10:37:16 -0700
From: oenabler@netcom.com (Output Enablers)
Message-Id: <199406241737.KAA16086@netcom13.netcom.com>
Subject: Frequently Asked Questions
To: daviding@astro.ocis.temple.edu (David Ingersoll)
Date: Fri, 24 Jun 1994 10:37:16 -0700 (PDT)
In-Reply-To: <Pine.3.07.9406241139.A4832-a100000@astro.ocis.temple.edu> from "David Ingersoll" at Jun 24, 94 11:36:39 am
X-Mailer: ELM [version 2.4 PL23]
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit
Content-Length: 9516
Status: RO
X-Status:

Frequently Asked Questions about Output Enablers' products

1) How does it work ? Do you also provide software or is this pure HW?

This is purely hardware. We provide a clip that disables the oscillator on the motherboard and replaces the signal with one from a higher speed oscillator. We also include a CPU fan on the models where it is necessary.

2) Does the installation involve any soldering?

There is absolutely no soldering involved. The clip attaches to the oscillator on your motherboard, and the CPU fan attaches to your CPU with double-sided heat-transfer tape. The installation is extremely easy to reverse, and new oscillator frequencies can be easily installed in the clip.

3) Do you have some long term data as to any damages down the road running the systems at higher speed ?

You will be running your processor at speeds above its rating, so it is possible that you may do some long term damage. However, we have been running up-clocked machines for 12 months, and we've never had any serious or long term damage.

4) Does everything else still work (serial io, scsi, DSP, floppy, memory, etc.) ?

The highest speed we can run with our clips is governed by conflicts with the serial subsystem (and the video on the av machines). The fast oscillators we supply are just below these limiting speeds. We also provide a second, slower oscillator in case your machine has problems running at the highest speed. The Centris 610 uses the motherboard oscillator to drive its ethernet subsystem, so upclocking a Centris 610 will disable the ethernet on that machine.

5) Did you run a test on the CPU as to the correct execution of each instruction (and the combination of any two instructions etc etc) ?

Yes. We've used "Snooper", a utility put out by Maxa to test all of our 680x0 kits for correct execution of instructions. (I'm not sure if "Snooper" does all combinations of instructions, however.) We've never had an up-clocked machine give spurious results.

6) Do you void the warranty by installing your clip ?

Absolutely. It is our understanding that up-clocking voids any

warranty you may have with your hardware vendor.

7) Why does Apple not provide the higher clock rate if it is possible without any damage/consequences ?

Good question. Possibly to give computer nerds like us here at OE something to do with our spare time....

Actually, the real reason is that it doesn't always work. If your processor or components are rated at a given frequency, there is a fair chance that they tested fine at that frequency, but that when tested at higher frequencies, the errors were major enough to cause unreliable performance. Usually, however, the timing tests on electronic components are fairly stringent, so there is a decent amount of play before any major errors show up.

8) Do you have a 30 day money back policy ?

We have a 30 day replacement policy for defective clips, and a 15 day unopened envelope return policy if you don't agree with the terms of an agreement that limits our liability.

9) Does the installation of your clip leave any marks ? (Do you have to cut traces or something like that?)

Nope. Nothing is cut. The clip is spring loaded and just touches the edge contacts of the oscillator. On the 840av and PowerMac 7100, the clip is attached by tightening a small screw that pulls the jaws of the clip on to the outside of the oscillator.

10) Can someone tell that I installed one of your clips and removed it again ?

Hmmm.... Maybe if you scratch the contacts, but that's pretty hard to do. If you are careful when putting the clip on, then I doubt anyone will be able to tell. If you have a 610, 660av, PM6100, or PM7100, we also provide a CPU fan that attaches with double-sided tape. Removing the traces of tape might require some weak solvent like isopropyl alcohol.

11) Where/how does it connect to the motherboard ?

The clip attaches to the sides of the oscillator on the motherboard. If your kit includes a CPU fan, it goes directly on top of the CPU.

12) Does it do anything else but providing a higher speed ?

Ummm... Nope. But what else did you want it to do?

13) Actually I was wondering if you provide any buffering or caches.

Nope. Just a faster oscillator. I've heard that another company was offering a DX2-like socket and a very high speed 68040 for around \$700, but our solution is a lot cheaper.

14) I was wondering whether or not the clip and CPU fan would prevent me from adding a PDS or NuBus card (such as DOS compatible card).

Depends on your Mac model. The clip may interfere with one of the NuBus slots on the following machines: C650, Q650, Q800, Q840av. On the C610, Q610, C660av, and PM6100 machines, there is no interference with any of the NuBus slots (although cards that install parallel to the motherboard may extend into where the clip and/or CPU fan reside). We don't interfere with the PDS slot on any of the models.

15) Other companies that make similar kits provide CPU fans on all their kits. Why doesn't Output Enablers?

We've found that serial port problems set in at lower speeds than where CPU-heating becomes a problem. On some of the models, CPU heating is an issue, so we provide CPU fans and thermal transfer tape to draw away some of the excess heat. Due to popular demand, we are now selling separate CPU fans for the other models or for people who want to build their own kits. The fans are priced competitively, and do a very good job of cooling both the 68040 and 601 chips. See our product list for more details.

16) Do you support the new PowerMacs? Will my accelerated Mac also accelerate the PowerPC PDS card or the L2 Cache card?

Yes! We currently have kits for the PowerMac 6100 and 7100 to boost them to 84 MHz. It is unlikely that we will be producing a kit for the 8100, however.

Our kits seem to work fine with the L2 cache cards, although our sample size is still very small. A PowerMac 6100/84 with the L2 cache card blows a stock 8100 out of the water in numerous benchmarks.

We've heard reports of people up-clocking PDS cards effectively to 70 MHz, and that cooling the 601 with a CPU fan will allow you to go even higher. Our experience with these cards is limited, so we don't yet know how fast they are able to go.

17) What Mac models do you support?

Our current product line has clips for the following models: C610, C650, C660av, Q610, Q650, Q660av, Q800, Q840av, PM6100, and PM7100. We can sell you the parts to do clock swaps on the IIsi, Q700, and Q900, but there is no way of making a simple clip for these models. If you want to up-clock the Q700, Q900, or IIsi, you will need to do some soldering on your main motherboard. If this worries you at all, don't attempt the clock swap without someone who does feel comfortable soldering your motherboard.

18) How can I get information about clock speeds and ordering information?

Send us e-mail at: oenabler@netcom.com. Or check out our anonymous ftp directory, which can be found at: <ftp://ftp.netcom.com/pub/oenabler>.

We also have a WWW home page! The URL for our home page is: "<ftp://ftp.netcom.com/pub/oenabler/www/index.html>". We keep current copies of our price list, order form, and FAQ sheet in these locations.

19) How do you ship your products?

We ship via first class U.S. Mail. Delivery takes approximately 1 week (depending on your location), so expect a 2-3 week delay from the time you sent your check until you receive your clip.

20) I really want my kit tomorrow. Will you to ship via FedEx/DHL/UPS?

Sorry, but no. Our prices are this low for a reason. All three of these shippers want outrageous amounts for shipping next-day air.

21) Do you ship outside the U.S.?

Unfortunately, we don't yet have an export license. If you can receive mail inside the U.S., we'd be happy to ship to that address. Otherwise, you might consider making one of the clips yourself. The parts can be found pretty easily at an electronics hobby shop, and the time and expense needed to make a clip are minimal. Instructions for do-it-yourselfers make frequent appearances on comp.sys.mac.hardware.

22) I live in the SF Bay area. Can I come by your store and pick up a kit?

Sorry, but the Berkeley address is just where we get our U.S. mail. We've seen very quick delivery for U.S. mail inside the Bay area, so if you can wait a day or two, you won't have to visit our fair city.

23) How can I ever thank you?

Spread the word! If you like our products and our prices, tell your friends and favorite newsgroups.

--

Output Enablers	1678 Shattuck Avenue
Makers of	Suite #247
"The Zippy Clip"	Berkeley, CA 94709
OE!	

From oenabler@netcom.com Ukn Jun 24 13:36:00 1994
Return-Path: <oenabler@netcom.com>
Received: from netcom.com by astro.ocis.temple.edu (5.61/25)
id AA11829; Fri, 24 Jun 94 13:36:51 -0400
Received: by netcom.com (8.6.8.1/SMI-4.1/Netcom)
id KAA16031; Fri, 24 Jun 1994 10:37:06 -0700
From: oenabler@netcom.com (Output Enablers)
Message-Id: <199406241737.KAA16031@netcom13.netcom.com>
Subject: Order Form
To: daviding@astro.ocis.temple.edu (David Ingersoll)
Date: Fri, 24 Jun 1994 10:37:05 -0700 (PDT)
In-Reply-To: <Pine.3.07.9406241139.A4832-a100000@astro.ocis.temple.edu> from "David Ingersoll" at Jun 24, 94 11:36:39 am
X-Mailer: ELM [version 2.4 PL23]
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit
Content-Length: 3633
Status: O
X-Status:

#### #####	Output	1678 Shattuck Avenue
# #	Enablers	Suite #247
# #####		Berkeley, CA 94709
# #	Makers of	
#### #####	The Zippy Clip	oenabler@netcom.com

Ordering Information and Order Form	Last updated 5/20/94
-------------------------------------	----------------------

Please refer to our Product Information sheet when filling out this form.

Output Enablers does not currently have the resources to process charge card orders. We regret that we can only take payment by check for smaller orders. We only accept cashiers checks or money orders for orders over \$200.

To place an order, fill out this form and send it to the address above with a check payable to "Output Enablers". Your order will be shipped the day we receive payment.

Your Name _____

Your Shipping Address _____

Your e-mail Address: _____

Your daytime phone number: _____

Your evening phone number: _____

Your fax number: _____

What model Macintosh do you have? Centris ____ Quadra ____ PowerMac ____

Please list the products you are ordering:

Product	Macintosh model	Quantity	Price	Total Price
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
			Order Total:	

To order, send this form and a check (in US \$) payable to "Output Enablers" to:
Output Enablers
1678 Shattuck Avenue
Suite 247
Berkeley, CA 94709

--

Output Enablers 1678 Shattuck Avenue
Makers of oenabler@netcom.com Suite #247
"The Zippy Clip" Berkeley, CA 94709
OE!

From oenabler@netcom.com Ukn Jun 24 13:36:00 1994
Return-Path: <oenabler@netcom.com>
Received: from netcom.com by astro.ocis.temple.edu (5.61/25)
id AA11802; Fri, 24 Jun 94 13:36:44 -0400
Received: by netcom.com (8.6.8.1/SMI-4.1/Netcom)
id KAA15947; Fri, 24 Jun 1994 10:36:54 -0700
From: oenabler@netcom.com (Output Enablers)
Message-Id: <199406241736.KAA15947@netcom13.netcom.com>
Subject: Product List
To: daviding@astro.ocis.temple.edu (David Ingersoll)
Date: Fri, 24 Jun 1994 10:36:53 -0700 (PDT)
In-Reply-To: <Pine.3.07.9406241139.A4832-a100000@astro.ocis.temple.edu> from "David Ingersoll" at Jun 24, 94 11:36:39 am
X-Mailer: ELM [version 2.4 PL23]
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit
Content-Length: 5452
Status: O
X-Status:

#### #####	Output	1678 Shattuck Avenue
# #	Enablers	Suite #247
# #####		Berkeley, CA 94709
# #	Makers of	
#### #####	The Zippy Clip	oenabler@netcom.com

Current Products and Price List.

Last updated 5/20/94

Output Enablers sells clip-on Macintosh accelerators. The clips work by replacing the signal coming from the computer's normal clock oscillator with one of a higher frequency. Beta testers have seen performance increases of 12-43% by using our clips, which we think is pretty darn good for such a small price! All our clips come with a second slightly slower oscillator that you can use if your computer doesn't work at the highest speed.

Here is a current list of our products and a brief description of each. Please e-mail us if you have questions, comments, or would like to order. Complete instructions for technically minded people are included. We provide no technical support, but if your clip is defective, we will replace it. Frequencies are sometimes substituted to increase speed or stability.

"The Zippy Clip" -- for the Macintosh Centris 610	
Includes the basic clip, a tape-on CPU fan,	
14.0000 MHz, and 14.31818 MHz oscillators	
Upgrades the Centris 610 to 28.6MHz.	
A 43% speed increase (approximately)	\$60.00
 "The Jet Clip" -- for the Macintosh Centris 650	
Includes the basic clip, 14.318 MHz and	
14.75 MHz oscillators. Upgrades the Centris	
650 to 29.5 MHz. An 18% speed increase	\$50.00
 "The Jiffy Clip" -- for the Macintosh Quadra 610	
Includes the basic clip and 15 and 15.288 MHz	
oscillators. Upgrades the Quadra 610 to 30 MHz.	
A 22% speed increase (CPU fan included)	\$60.00
 "The Turbo Clip" -- for the Macintosh Quadra 650	
Includes the basic clip, 20.8 and 22 MHz oscillators	
Upgrades the Quadra 650 to 44 MHz. A 33% speed increase	\$50.00
 "The AV-rocket" -- for the Macintosh Centris and Quadra 660av's	
Includes the basic clip, 16 and 17.496 MHz oscillators	
Upgrades the Quadra 660av to 35 MHz. (includes CPU fan)	
A 40% speed increase	\$60.00
 "The Rocket Clip" -- for the Macintosh Quadra 800	
Includes the basic clip, 20 and 20.8 MHz oscillators	
Upgrades the Quadra 800 to 42 MHz. A 27% speed increase	\$50.00
 "The AV-terburner" -- for the Macintosh Quadra 840av	
Includes a modified clip, 23.247 and 24 MHz oscillators	
Upgrades the Quadra 840av to 48 MHz. A 20% speed increase	\$50.00
 "The PowerClip 6100/84" -- for the PowerMac 6100	
Includes the basic clip, 40 and 42 MHz oscillators,	
and a small CPU fan that installs inside the normal	
heat-sink. Upgrades the PM6100 to 84 MHz.	\$55.00
 "The PowerClip 7100/84" -- for the PowerMac 7100	
Includes a modified clip, 40 and 42 MHz oscillators,	
and a small CPU fan that installs inside the normal	
heat-sink. Upgrades the PM7100 to 84 MHz. Please note	
that installing this kit requires you to dismantle your	
computer completely. Not recommended for technophobes.	\$60.00

"The Granny Smith" -- by special order only
 Does your boss pass his old computers down to you?
 Installing the Granny Smith in your boss' computer will
 slow it down to a crawl. When you get the computer,
 simply pop in the second oscillator and away you go!
 Includes one clip listed above, two high speed
 oscillators, plus one significantly slower oscillator. \$55.00

"The 040 chiller" -- for all 68040 Macintosh models
 This is a heat-sink/fan combination that attaches to
 the 68040 chip in your machine to dissipate heat
 from the CPU. It attaches to the CPU using
 double-sided heat transfer tape and obtains power
 from the hard disk or CD-ROM. \$15.00

"The Power chiller" -- for all PowerMac models
 This is a CPU fan that fits nicely inside the 601
 heat sink and cools your up-clocked CPU. It
 obtains power from the hard disk or CD-ROM. \$10.00

"Crystals" -- for all our clips
 We sell TTL crystal oscillators at a very large number
 of frequencies. Our policy on crystal purchases is
 this: If you are ordering additional crystals with one
 of our kits, they are \$5 each. If you are just buying
 crystals, the first one in an order is \$7, and
 additional crystals in that order are \$5. Please
 contact us about bulk pricing if you would like to
 order more than 10 crystals at a time. Our list of
 frequencies is too long to be mailed, but if you
 contact us with a 1 or 2 MHz range, we can tell you all
 of the frequencies that we sell in that range. \$7 or less

--

Output Enablers	1678 Shattuck Avenue
Makers of	Suite #247
"The Zippy Clip"	Berkeley, CA 94709

OE!
