



**We at LapWorks welcomes all  
our User Group friends**

**We hope this presentation is informative and  
enlightening to all who own or are considering  
purchasing a notebook computer**

**Presenter: José Calero  
President & Chief Product Architect  
LapWorks, Inc.**

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## **OPENING STATEMENT**

- Thank you for this opportunity to speak to your group and we would especially like to thank your leaders for extending the invitation to share with you.
- This presentation will run approximately 45 minutes and we hope you enjoy what we have to share with you.
- Here's an overview of the agenda. We're going to first talk about LapWorks the company. We'll tell you a little bit about ourselves and what we do.
- Then we'll share some interesting facts about the problems associated with overheated notebooks
- Item #3 will be a complete-as-possible overview on the current offering of notebook desks and stands available on the market today.
- This will be followed by an important presentation on Ergonomics - what it is and why it's important to you.
- Finally we'll show you a few of our products and why we think they're superior to any of the other desks and stands available on the market today.
- We will conclude with some questions and answers that will help you zero-in on making the best choice when it comes time to choose the best Laptop Desk or Desktop Stand for your personal needs.

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### **AGENDA ITEMS LISTING:**

- I** – We'll talk About LapWorks the company
- II** – What you should know about notebook overheating problems
- III** – What you should know about notebook desks & stands

IV – What you should know about notebook Ergonomics

V – What you should know about LapWorks products

VI – Q & A

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## ITEM # I – About LapWorks

LapWorks is a design and manufacturing company specializing in laptop accessories that make working with a laptop computer safer, easier and more productive. Our products:

- Improve posture/ergonomics to help users work “pain-free”
- Reduce heat build-up in notebooks

And . . .

- Protect a user’s lap from the heat that radiates from the bottom of laptops

We also seek to provide value-added services, resources and timely information to help our customers better understand...

1. How to use a laptop computer in an ergonomically-correct manner to promote long-term health and avoid injuries.
2. How to care for a laptop computer to promote its long-term health as well.

To that end, we provide the following **FREE** resources to our customers:

- **Ergonomic Illustrations** such as this one showing correct laptop-using posture which we co-developed with injury-prevention-leader Sally A. Longyear, CIE, MPH: <http://www.laptopdesk.net/press-photos.html#ergonomictips>
- **A monthly newsletter** with helpful tips on laptop ergonomics, usage and maintenance: <http://www.laptopdesk.net/news-letter.html>
- **A direct line to Wendy Young, a licensed ergonomist** who will answer ergonomic questions about laptop computing: <http://www.laptopdesk.net/ergonomics.html>
- **A direct line to Keith, a mobile professional consultant** who will answer any mobile pro questions you would like to ask: <http://www.laptopdesk.net/mobilepro.html>
- **A Laptop Computer Care and Feeding Guide** full of tips for those who sign up for our newsletter: <http://www.laptopdesk.net/signup.html>

Here’s a brief overview of our four product categories:

**The first is “Lap Desks”**

LapWorks invented the wide-span portable Laptop Desk product category in 2000, and is the only company making dual-purpose lap desks that double as desk stands. We are fortunate that our 4 Laptop Desks – the Futura, the UltraLite, the 2.0 and 1.0 – have become the best-selling lap desks in America, selling more than 22,000 units per month. And we now

offer brightly-painted Laptop Desk Futuras in 12 brilliant colors and patterns.

### **The second category is “Desktop Stands”**

In 2006 we expanded our line with desktop stands. They serve different ergonomic roles such as Desktop Typing Stands for direct typing and Desktop Replacement Stands which create a desktop “docking station” for use with a separate keyboard and mouse.

### **The third category is “Off-The-Lap Stands”**

As of 2007 we now offer two Off-The-Lap Stands that support a laptop while reclining on a sofa, relaxing in bed or just sitting on the floor.

### **And the final category is “Gamers Desks”**

As of June 19, 2008 we launched our Gamers Desks for PC gamers who have moved to their couches to play First Person Shooter (FPS) and other high precision games on their HDTV or laptop screen. The new Gamers Desk provides a comfortable, ergonomically-sound, wide flat platform across the lap with ample space for a broad gaming keyboard and optical mouse or a laptop and external mouse.

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## **ITEM # II – What you should know about notebook overheating problems**

If you own a notebook computer then you should know this information because your notebook’s proper operation and eventual life span depends on how you deal with this issue. The issue is heat build-up in your notebook and if you didn’t already know, heat is your notebook’s worst enemy – plain and simple. Aside from certain death that comes with the crash-to-the-floor or liquid spill over the keyboard, internal heat is the defacto number one killer of notebook computers. What most people don’t know about this issue and what most manufacturers won’t tell you is that the excessive heat within your notebook eventually wears out the electronic components. That’s why notebooks die – they simply wear out from heat fatigue.

If you own an automobile, you probably know that the cooler the engine runs the longer it will last . . . along with changing the oil regularly. A notebook computer is no different. Keeping a notebook running as cool as possible will help minimize screen freezes, timeouts (overheating shutdowns), delayed operations, blue screens and even degraded WiFi connectivity.

So why do notebooks suffer from this overwhelming heat condition? The manufacturers are in a race to produce the thinnest, lightest, cheapest notebook possible and most of them are willing to sacrifice form for function. They install desktop CPU's that require heavy duty heat sinks and exhaust fans but don't install those cooling devices because there's no room inside the notebook housing for them. As a result you have a portable computing device that you can fry eggs on until well done. . . and bacon until it's crispy!

Let me state that the purpose of this subject is to explain as simply as possible how heat is generated inside your notebook and how to reduce, as much as possible, the negative affects it has on your notebook. Please understand that you will NOT be able to eliminate these negative affects altogether but there are some things you can do to mitigate them.

This section is **NOT** intended to be a complete and thoroughly exhaustive explanation on the affects of heat on your notebook but rather a basic understanding on the subject. If you do a simple Google search using the search term 'Overheated Notebooks Computers", you will find more information than you will probably care to read.

To explain this phenomenon, let me start with a few key questions:

### **1 – What are the sources of heat in your notebook?**

1. Hard Drive / CPU
2. Video chips
3. Battery
4. Software failures
5. Wireless network cards
6. External temperatures over 100°

### **2 – Why does the heat build-up in your notebook?**

1. Poor notebook design – i.e. ventilation
2. Not enough heat sinks
3. Blocked air vents
4. Dust and dirt build-up
5. Exhaust fans are overwhelmed
6. No exhaust fans or exhaust ports whatsoever

### **3 – What can you do to mitigate these heat effects**

1. Before you buy your next notebook, check it out, avoid those with overheating problems
2. Regularly clean the ventilation ports to insure good ventilation
3. Blow compresses air through your computer to clean out the dust build-up

4. If possible, clean off the exhaust fans with a hand vacuum cleaner
  5. Incline the notebook so hot air can escape more easily
  6. Use a notebook stand with a built-in USB fan if your notebook gets really hot
  7. Adjust the computer settings to slow down the computer's operation
- and finally. . .
8. Place your notebook on a hard surface and never on a pillow or blanket

**NOW! AN IMPORTANT NOTE** – Unless you are really experienced, do NOT attempt to remove the keyboard yourself to dust around inside your notebook. First, it's really dangerous and you could receive an electrical shock. Second, you would probably void any factory warranty by doing so.

Finally, I'd like to provide you with a brief explanation on heat and how it works in regards to your notebook. In the physical world, heat is released or transferred by one or a combination of three primary methods:

- **Convection** – the exchange of warm air for cool air
- **Conduction** – transferring heat by physical contact
- **Radiation** – heat radiating out from a source into open air

Because the heat builds-up within the housing of your notebook, its primary method of escape is radiation. Typically it radiates out the bottom of your notebook as everyone who has worked with a notebook on their lap can tell you. It gets hot. So as it radiates out the bottom of the notebook while it's on your lap, it's being absorbed by your clothes first and then your skin. That's called conduction - transferring heat by physical contact. Your lap is in direct contact with the heat source and it's absorbing the heat as it radiates from the bottom of your notebook. Can you say "Ouch"?

Conduction also comes into play when you have a lap desk that's in direct contact with the bottom of the notebook. As heat radiates from the bottom of the notebook it is being absorbed by the lap desk. If the lap desk is made of plastic, it would absorb the heat, concentrate it and then begin to act as an insulator. Then the heat from the lap desk would begin to radiate the heat downward towards your lap but at a lesser intensity. If the lap desk is made of Aluminum, it will absorb the heat and dissipate it across its platform and be less likely to radiate it downward towards your lap.

The best combination of heat dissipation, however, is radiation and convection. That happens when heat that is radiating from the bottom of

your notebook is allowed to travel laterally along the surface of the lap desk and then rise. After all, that's what heat does, it rises. So if you have a situation where the heat is radiating from the bottom of your notebook and allowed to escape laterally, you'd then want cool air to rush in to replace the escaping warm air. This provides the ideal convection cycle where heat escapes, cool air rushes in to replace it thereby cooling your notebook.

This is notebook cooling at its best and can be achieved by either a passive or forced cooling methods. The passive option requires no tools or devices – it's based on a natural convection cycle. The forced cooling option requires fans and fans need power from the notebook computer.

**In conclusion**, this is an important subject and everyone who owns a notebook computer should know about it. Go online and Google "Overheated Notebook Computers" and learn as much as you can about the subject. Because if you don't deal with the problem now, you most certainly will have to deal with the consequences down the road.

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## **ITEM # III – What you should know about notebook desks & stands**

Our aim is to help you understand these products so you can become a well informed consumer and make better buying decisions about these products as they apply to your own particular needs.

We've already discussed the problem with notebook computers and heat. We said that notebook makers are in a race to provide the thinnest form factor and most attractive notebook design and often times sacrifice form for function. A hot laptop can suffer from reliability issues and a system that overheats can fail.

But that's not the only problem with the heat that radiates from the bottom of a notebook computer. Here is Cornell University: "A hot laptop can be uncomfortable to use in your lap. The heat from some laptops can be enough to cause superficial skin burns, even through clothing! The Lancet medical journal reported (November 2002) the case of a healthy 50-year old scientist, fully dressed in trousers and underpants, who burned his genital area after placing his laptop on his lap for an hour." Can you say Ouch!

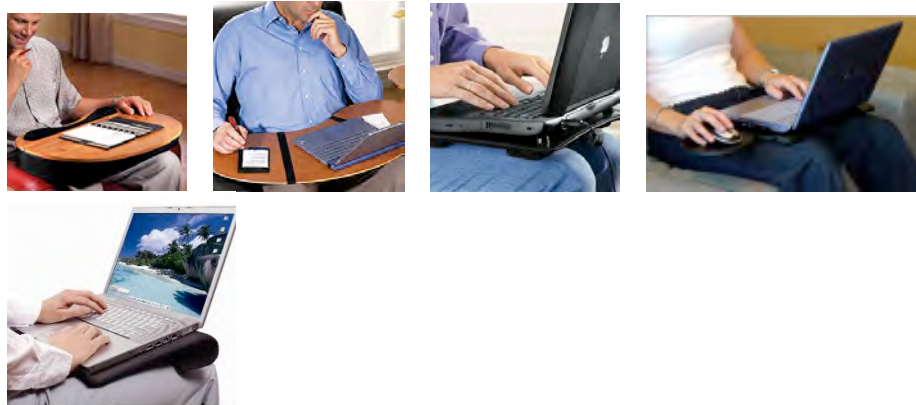
Those are some of the reasons to use a notebook desk or stand. Now let's get started on describing the five basic categories of product solutions that can mitigate the negative affects of an overheated notebook computer:

1. **Lap Desks**
2. **Direct Typing Stands**
3. **Desktop Replacement Stands**

4. Off-The-Lap Stands
5. Pedestal Desk Stand

Each is explained below in further detail. Each is defined from a perfect-world perspective and not from any particular product's perspective.

### The First category is **LAP DESKS**



Are flat rigid platforms that span the lap completely allowing the users legs to relax in a naturally comfortable position. This is more important for men because they usually sit with their legs further apart requiring a full, lap spanning LD measuring 20" to 21" long. There are two basic kinds of Lap Desks, stationary and portable. Stationary LD are bulkier and usually padded for long term use in an office or home environment. Portable LD are thinner, light weight and foldable. A portable LD should also have some no-slip surfaces or rubber bumpers to prevent slipping. For mobile use, a LD should be thin and lightweight so as not to add to the thickness or heft of the computer bag. The LD should allow for ventilation under the notebook so it has the ability to breathe. Finally, a portable LD should NOT incline the notebook's keyboard because it will force the user to bend their wrists upward which will certainly cause or at least contribute to Carpel Tunnel Syndrome.

### The second category are **DIRECT TYPING STANDS**



are used on a desk top or table top to incline the keyboard and for elevating the screen height closer to eye level to create the best ergonomic typing position possible. An ideal DTS will also have multiple incline positions to select from rather than one fixed position. DTS's with a fixed incline force your body to adjust to it rather than the other way around. DTS's should also have useful features like USB-powered fans, 4-port USB hubs and some even swivel 360°. Some DTS fold flat for storage while those in a fixed shape are too thick and bulky to carry in a computer bag. A DTS should also provide no-slip surfaces or rubber bumpers to prevent slipping and to serve as separators between the notebook and the surface of the DTS. The DTS does not have to be larger than the footprint of the notebook providing that it has rubber bumpers to separate the bottom of the notebook from the surface of the DTS for convection and ventilation.

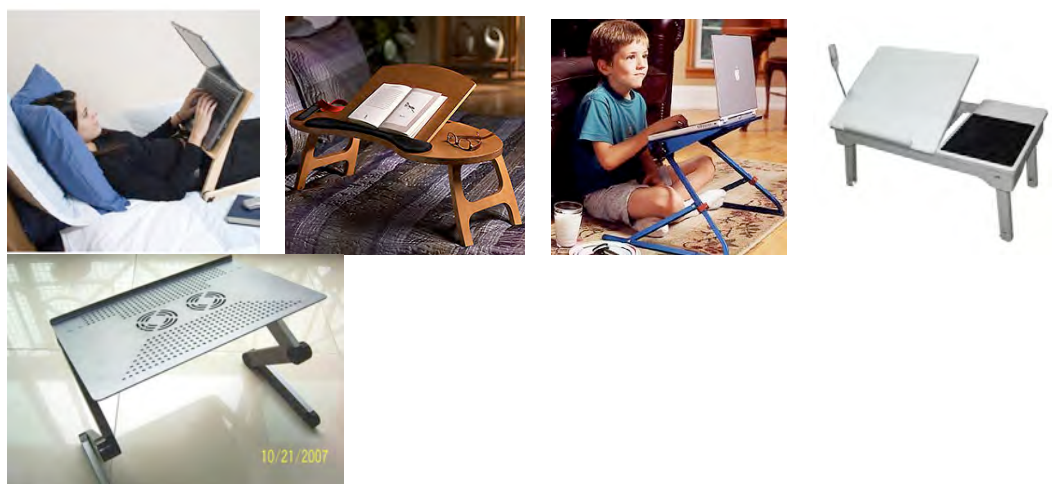
**The third category is DESKTOP REPLACEMENT STANDS**



incline the notebook in a 40° to 45° angle and elevate the viewing screen to the proper viewing height which is at or just below eye level. This incline

makes it impossible for direct typing so a separate keyboard and mouse are required for data entry. DRS have become the next generation of “Docking Station” since the notebook is quickly replacing the desktop computer. The old style docking station is expensive and outdated and a DRS with useful features like USB-powered fans, 4-port USB hubs and a 360° swivel have become their modern replacement. As above, no-slip surfaces or rubber bumpers are essential for gripping and for separating the notebook from the surface of the DRS. Because of the severe incline, it is necessary that the shelf that supports the notebook are spread apart wide enough to provide a stable platform. The DRS should also have a wide enough base so it is stable and not wobbly.

### The fourth category is **OFF-THE-LAP STANDS**



are free standing platforms with a set of adjustable articulating or multiple-hinged legs that can be positioned into tens if not hundreds of heights and incline positions. These OTLS are ideal for supporting a notebook in a mid-air position. OTLS are well suited for the bed-ridden but can also be used on the floor where the user can set the leg adjustments so that the notebook is positioned at a comfortable typing and viewing level. These OTLS are more complicated to set-up but once the mechanics are mastered, they can become a valuable and most versatile notebook companion.

### And the fifth category is **PEDESTAL DESK STANDS**



The final category are typified by a flat platform with a single pedestal leg or a tripod leg support. Many of these designs have telescoping legs that

can fold flat and some attach to a wheeled travel case. This form factor is the least popular of all the desk stands listed above but does have a practical application if you have a need for the application. Their materials range from aluminum to ABS plastic.

There are other miscellaneous types of desk stand but their numbers are so few we're not going to mention them here. The five categories mentioned above represent 98% of all notebook desk and stands on the market.

As you can see from the above descriptions, there are five basic categories of desk stands that can work to reduce the health hazards for both you and your notebook. We hope this summary has helped you better understand these products so you can become a well informed consumer and make better decisions about them as they apply to your own particular needs and lifestyle.

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## **ITEM # IV – What you should know about notebook Ergonomics**

**CORNELL UNIVERSITY ERGONOMICS DEPARTMENT:** “the design of laptops violates a basic ergonomic requirement for a computer, namely that the keyboard and screen are separated.” But as you know, that’s not the case with laptop computers. The Cornell website goes on to explain why notebook design is a problem, “The reason is simple - with a fixed design, if the keyboard is in an optimal position for the user, the screen isn't and if the screen is optimal the keyboard isn't.”

**HARVARD UNIVERSITY ERGONOMICS DEPARTMENT:** The use of laptop computers poses an ergonomic challenge – Laptops do not easily allow basic ergonomic adjustments since they have a fixed design. When the keyboard is in the proper position for the wrist, the screen is not at an adequate height for viewing and vice versa. Using a laptop, however mobile and convenient is a tradeoff between poor neck/head posture and poor hand/wrist posture. To alleviate this potential problem we recommend the use of a laptop stand. Laptop stands come in different sizes, styles, shapes and colors.

**CENTER FOR DISEASE CONTROL (CDC):** “Laptop computers are not recommended as primary computers. In the office or while at home, a docking station is recommended to provide adjustability which will enhance neutral postures.”

**WHY DO WE TALK ABOUT THIS ISSUE?:** We're not just about pushing products – we also push information - knowledge. Of course we'd like to

sell some products - that's how we stay in business. But first we'd like to enlighten you so you can make better, more informed decisions and here's the rationale for this thinking.

A couple of years ago we took a long, hard look at this business and realized that there are some serious long term harmful effects that can come from misusing a notebook computer. At that time we didn't see the big notebook manufacturers stressing ergonomics or the need for notebook users to learn new strategies when working with a portable computer. Even today you don't hear a lot about the issue but it exists nonetheless. And it is taking its toll.

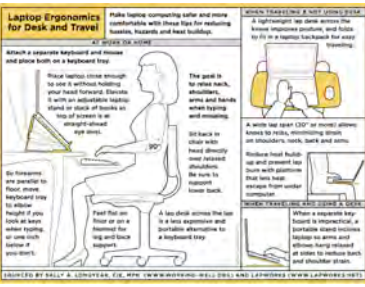
So we came to the realization that since we sell products that provide ergonomic benefit to notebook users and reduce the hazards of using a notebook computer, who better to provide enlightenment in this area than someone like us. We realized that good ergonomics makes for good economics. That's why we invested heavily in providing resources that had a big emphasis on ergonomics. We even have an Ergonomist on staff who can answer your questions for FREE about laptop computing.

We feel confident that when our customers and customers-to-be visit our site and make that small investment in time to learn how to work safely and comfortably with a notebook computer, they will eventually come to live better, healthier lives.

It is our firm belief that an informed consumer is our best customer. The more you know about proper ergonomics, the more you will appreciate our products over the other guys.

Do not underestimate the importance of ergonomics. It could save you much pain and suffering down the road. Think Carpel Tunnel Syndrome, Think Cumulative Trauma Disorders (CTDs), think back pain and shoulder fatigue. Setting up the proper ergonomic environment is a process of coordinating the following conditions: your body height in relation to your chair height, required back support, desk height in relation to your chair height, distance from the desk, type and size of notebook used, ideal viewing position and much, much more.

We offer the following Ergonomic Illustration that demonstrates practical uses that will help you work smarter and avoid pain in the future. This link will let you download the illustration you're seeing so you too can live and learn to work pain free: <http://www.laptopdesk.net/ergonomics.html>



But if you're still not convinced that you could possibly fall victim to some form of ergonomic injury, then consider this. . . .

**Question:** Why do laptops cause so many ergonomic problems?

**Answer:** because they were designed for portability... NOT PRODUCTIVITY!

Here are more fun facts directly from the OSHA website:

1. Back specialists say as many as four in five patients have chronic nerve damage caused by working on Laptops
2. The problem is getting much worse as ergonomic related injuries are rising at an unprecedented level
3. 1.8 million workers suffer from ergonomic-related injuries each year
4. Of these, 600,000 employees, or one third, have ergonomics related injuries severe enough to require time off

Want more proof? Listen to this:

- **Ergonomic injuries:** currently cost \$15 billion to \$20 billion dollars annually for workers' compensation and \$30 billion to \$40 billion in other expenses such as medical care.\*
- **Healthcare premiums are rising:** Since 2001, the cost of premiums has gone up 78 percent, far outpacing a 19 percent increase in wages and 17 percent jump in inflation
- **Company lawsuits regarding ergonomic medical conditions are on the rise:** Computer manufacturers have spent a total of less than \$1 million to research ergonomic improvements, a sum the Office Ergonomics Research Committee calls "woefully inadequate."

So here's the bottom line: take this problem seriously or it could happen to you.

Problems with Carpel Tunnel Syndrome or Cumulative Trauma Disorders don't crop up over night like a muscle sprain. They take weeks, often times months and even years to develop. But once they hit, it takes time, money, surgery and months of convalescing to recover. There's plenty of information on the Internet about every form of ergonomic injury known to man. Google "Cumulative Trauma Disorders" and see what comes up. Good luck.

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## ITEM # V – What you should know about LapWorks Product

**BUT FIRST A WORD ABOUT OBJECTIVITY . . .** The presentation above was done from a completely unbiased standpoint. Although we could have easily described our products under each of the categories detailed above, we didn't. Partially because we knew you'd see through it anyway. We tried to make an objective analysis of the five categories and describe them from a perfect world standpoint. We made no attempt to promote our products or denigrate a competitor's product. We simply wanted to be fair and objective and give you the tools to make up you own mind.

And now for the best part of this presentation. . . . or at least we think so. Below are represented four of the five basic categories of notebook desks listed above. They are:

1. Lap Desks
2. Direct Typing Stands
3. Desktop Replacement Stands
4. Off-the-Lap Stands
5. And for the record, we don't carry Pedestal Desk Stands.

Our first category is **LAP DESKS . . . . .** we have four different Lap Desks but they will be described generally within the category rather than describe each one.

1. All of our Laptop Desks are portable, lightweight and ideal for mobile use. They fold in half and can be carried in a computer bag.



2. The three lap desks featured here serve as lap trays that completely span the lap as well as a direct typing stands on the desk.



3. They all have a fold-down support arm that can be set in one of five typing angles to select the best incline for your particular needs.



4. They all have no-slip rubber on both sides to prevent slipping and provide that extra gripping.



5. All three units have been tested by a team of university engineers and proven to reduce heat build-up in notebooks by up to 20%.

6. They all protect the lap from the excessive heat that radiates from the bottom of notebooks.



7. In the maximum incline position, all three lap desks raise the computer screen's viewing height 3 ¼-inches closer to eye level.



Show here are full images of each of our portable, full lap-spanning, dual-purpose Laptop Desks Stands

### **Laptop Desk 2.0 – The Heavy Duty**



### **Laptop Desk UltraLite – The Thin & Light**

Laptop Desk™

UltraLite™



**Futura Laptop Desk – The Stylish and Modern**



The next category is **DESKS STANDS. . . .**

The Desk Stands show below are a small sampling of the many different desk stand units we have available. Please visit our website at [www.laptopdesk.net](http://www.laptopdesk.net) to see the full offering of desks and stands for yourself.

The first Desk Stand we'd like to show you is the **Aluminum Desk Stand (Category: DTS & DRS)**



- Sturdy construction of brushed Aluminum material
- Absorbs heat and reduces heat build-up in notebooks up to 20%
- Six adjustable angles of elevation to choose from
- Maximum elevation raises screen height up to 6-3/4" closer to eye level
- Built-in swivel allows for 360° degree rotation for screen sharing
- 3 Lower elevations raise the notebook screen 3-1/2", 4", or 4-3/8"
- 3 higher elevations raise the notebook screen 6", 6-1/2", and 6-3/4"
- Folds flat to 3/8" thin for easy storage
- Suitable for any size laptop
- In lowest elevation can be used as a direct typing stand
- Angle the notebook's keyboard to improve typing ergonomics.
- Creates an ergonomically-sound desktop workstation when using a separate keyboard
- It's light enough to be carried in the computer bag at 1 pound, 5 ounces
- The unit folds down to 3/8" thin and measures 12 x 9.5 x 3/8" for easy storage
- Includes neoprene travel bag that also serves as mouse pad

The second Desk Stand we'd like to show you is the **Attaché Stand (Category: DTS & DRS)**



- Sturdy high impact ABS plastic and Aluminum plate for heat absorption and dissipation
- Two built-in USB fans for cooling and air circulation
- 4-port USB hub for connectivity
- Off/on power switch and mini USB hub to power fans
- 4 position push-button incline selection
- Maximum incline is 40°
- Raises viewing screen height by 8-1/4"
- Supports all wide screen notebooks with ease
- 5 volt A/C adapter power port (adapter not included)
- Concave front panel design to increase convection
- Two flip-down support legs to hold notebook securely while inclined
- Can be used as direct typing stand in lowest incline
- 1/8" thick Aluminum plate for heat absorption
- Top platform dimension 12-3/4" x 12" x 1-5/8" thick
- Weight is 2 lbs. 7 ounces

The last Desk Stand we'd like to show you is the  
**Wizard Desk Stand (Category: LD, DTS, DRS, OTLS)**



- The first all-purpose, fully adjustable, off-the-lap or on-the-lap notebook stand available
- Ideal for those who are bed-ridden or who just prefer to work on the floor
- Configurable to just about any position, angle or height up to 24 inches
- The Wizard lifts your notebook off-your-lap and positions it for easy viewing
- Two pairs of three, hinged articulating legs that create an infinite number of angles
- 22" long, it can also be used as a lap desk on your lap without extending the articulating legs
- Largest Aluminum panel of any notebook stand on the market
- Overall Dimensions: 22" x 11-7/8" x 1-3/4"
- Table Top Dimensions: 17-3/4" x 11-3/4" x 1-3/4"
- Rubber wrist pad for comfort runs 17-3/4" the full length of the Aluminum plate
- Weight: 4 Lbs. 8 oz.
- Color: Gun Metal Gray
- Materials: Aluminum, Plastic & Rubber

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**ITEM # VI – Q&A To Identify The Best Desk or Stand For Your Particular Needs**

**Q1 – *Does your notebook get really hot on its underside? Does the cooling fan cycle on repeatedly?***

**Answer ‘YES’ :** Then you need to decide that whatever product you select provides a form of active cooling. A product with a USB fan to circulate the hot air or a product that has a thick Aluminum platform to help absorb the heat or both would be preferable here.

**Answer ‘NO’ :** Then just about any desk or stand would be helpful depending on your other comfort needs and working requirements.

**Q2 – *Does your notebook get uncomfortably hot when using it on your lap?***

**Answer ‘YES’ :** First you need a Lap Desk that will span your lap completely so you can move your legs away from the heat source if necessary. Then you need a product for cooling your notebook through a USB fan or other efficient passive cooling system. Make sure it reduces the heat build-up in your notebook and allows for uninterrupted convection cycling.

**Answer ‘NO’ :** Then just about any product would be helpful depending on your other comfort needs and working requirements.

**Q3 – *When you remove your notebook from your desktop, does it leave a really hot spot where it was sitting?***

**Answer ‘YES’ :** Obviously your notebook runs hot so you should always put some sort of heat reducing stand or platform under your notebook to help it run cooler. Never set your notebook on a pillow or directly on the covers of your bed because they will act as an insulator and create greater heat within your notebook. Setting your notebook on some pillows or your bed covers can also cover up the intake or exhaust ports essentially preventing your notebook from breathing.

**Answer ‘NO’ :** Your notebook does an effective job at dissipating the heat that builds up inside it.

**Q4 – *Will you be using your notebook mostly at your desk or mostly in the field or a little of both?***

**Answer ‘Mostly at my desk’ :** A Direct Typing Stand would be appropriate in this case. Look for something that can cool your notebook as well as create multiple typing angles or inclines to adjust to your comfort level. What looking for a typing stand, look for one that gives you

the most options to create the best ergonomic environment possible and cooling for our notebook.

**Answer ‘Mostly in the field’ :** A lightweight, thin profile lap desk with a wide span is your best choice. There may times when you’ll be sitting cross-legged on the ground or at a park where you’ll want a wide span for the best notebook typing and viewing position. The lower your notebook sits away from your eye level the more you’ll have to crane your neck to see the screen. This could cause neck strain over the long run. So be careful when working in these positions that you take regular breaks to stretch your muscles.

**Answer ‘little of both’:** You’ll want one each of the above or a combination product that is a Lap Desk and a Direct Typing Stand to accommodate both of your notebooking requirements.

**Q5 – *Do you travel often with your notebook and require a mobile desk or stand while traveling?***

**Answer ‘YES’ :** Then a combination Lap Desk with a wide span that also doubles as a Direct Typing Stand is recommended here. You obviously don’t want to carry two products while traveling. The Lap Desk should be lightweight and thin profile for mobility. If you travel often you’ll want something that doesn’t take up much room in your computer bag and that also doesn’t add much heft to your load. Computer bags are already bulky and heavy enough so be careful of your selection.

**Q6 – *When you travel, will you be taking a separate keyboard and optical mouse with you?***

**Answer ‘YES’ :** Few will answer ‘yes’ but for those who do, the best choice is a Desktop Replacement Stand that is built for mobility. It would have to be portable, thin profile and lightweight so as not to add to the overall bulk and weight of your computer bag.

**Q7 – *Do you usually sit on your sofa or bed and work on your notebook computer?***

**Answer ‘YES’ :** On the sofa, select a product that allows your legs to relax naturally without having to squeeze them together to support a desk stand that is too narrow. Look for a lap desk that is a minimum of 20” long to provide the most comfort. If you’re going to work long hours on your lap, then you might want something with cushion pads for added comfort.

For working in bed, do NOT set your notebook directly onto your blanket because they act as an insulator covering up the intake / exhaust ports on your notebook effectively suffocating it. Always use a desk stand with a hard surface and will allow for efficient air flow under your notebook. Also consider Off-The-Lap-Stands that support your notebook in mid-air and allows you to squirm around in bed without affecting the position of your notebook.

**Q8** – *Do you sit on the floor when working on your notebook computer?*

**Answer 'YES'** : Then you should consider a lap desk that rests on your lap completely spanning it and is over 20” long. Also consider Off-The-Lap-Stands that support your notebook in mid-air and allows you to squirm around without affecting the position of your notebook.

**Q9** – *Do you ever use your notebook outside the office or home like at a Starbucks?*

**Answer 'YES'** : Every Ergonomist will tell you NOT to type on a flat keyboard. So when your out and about and intend to use your notebook, take along a dual purpose lap desk and direct typing stand. This will allow you to work on your lap if no chair or table is available and will convert to a direct typing stand when a table does become available. Also make sure this product can effectively reduce the heat build-up in your notebook.

**Q10** – *Do you always work at the same place with your notebook or do you work in different locations?*

**Answer 'Same Place'** : If you use your notebook as a desktop replacement, then consider using a separate keyboard and optical mouse for data entry and a Desktop Replacement Stand to elevate your notebook above a 40 degree angle for your viewing comfort.

**Answer 'Different Locations'** : Every Ergonomist will tell you NOT to type on a flat keyboard. So when your out and about and intend to use your notebook in different locations, take along a dual purpose lap desk and direct typing stand. This will allow you to work on your lap if no chair or table is available and will convert to a direct typing stand when a table or desk do become available. Also make sure this product can effectively reduce the heat build-up in your notebook.