# USER'S GUIDE

# INTELLIGENT

**Netbook Computer Cart** 





### **NETBOOK42**

42 Netbook Computers in Vertical Slots

#### Maximize your technology investment

Unique Power Management & Control System (patent pending) gives you the ability to:

**Extend the battery life** of your computers with one touch!

Save on energy costs - the "Brain" knows the more charged a battery, the less power it requires.

#### Designed for the IT Coordinator, the Instructor & the Student

Easy set-up for the IT Coordinator

Easy to maintain by the Instructor

Easy to use for the Student

Laser-cut Identification System helps keep you in control and your investment organized.



#### All about Safety & Security

Peace of mind, knowing that the entire cart is UL PENDING - not just the electrical units. So your students - your real technology investment - are safe and secure.



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#031-8538

# **Assembly Instructions**

#### **Unleash the Power Cord**

The 10-foot Power Cord is tucked inside the back of the cabinet. Looking at the back of the cart, find the grommet hole beside the right handle. Thread the plug through the grommet hole, pull the cord through, and wind around the handle.



Always Turn Off the Power to the Cart before Plugging In Or Out!

ORANGE

Only the 2 Auxiliary Outlets have

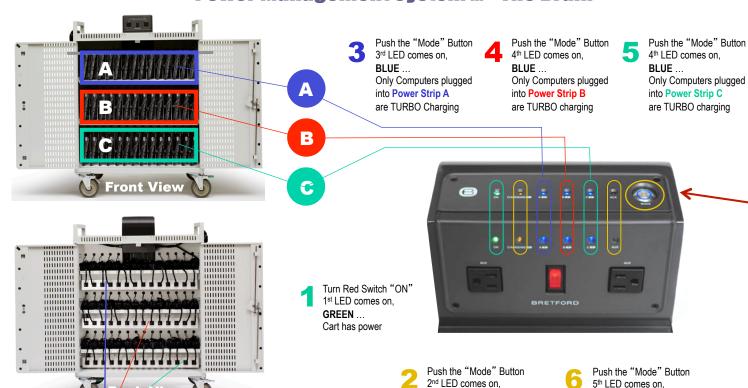
power, no battery charging

### **Setting the Combination Locks**

Your new Intelligent Laptop Computer Cart comes equipped with two re-settable Combination Padlocks. You can program them with the same combination or different combinations – the choice is yours. Each lock starts with 0-0-0-0. Follow the directions with the lock for changing the combination. Remember to depress the shackle before un-engaging it from the lock.



# **Power Management System ... "The Brain"**



Power Strips A & B & C are controlled by the "Brain", which shifts the power from one strip to the other, and even allows a "Turbo Charge", where all available power is sent to either Power Strip A or B or C – Steps 3 & 4 & 5

- The Brain recognizes as batteries become charged, and sends only enough power to keep the batteries well within their thermal limits, drawing only the required power and saving you money.
- "Round Robin" sequencing evaluates the demand for power from each electrical strip of 14 computers, concentrating on those batteries that have the most demand for power.

YELLOW

charging

All computers in the cart are

- "Round Robin" also allows each electrical strip time to cool down. Cooler batteries last longer, and extended battery life saves you money.
- A single **Mode Button** lets you cycle through the various settings, while the LED lights help keep track of what the power system is doing.
- Two Auxiliary Outlets on the top of the cart let you use a video projector or a printer with confidence, since the Brain will dedicate the power to those accessories when you need to use them. Accidentally overloading the circuit is minimized!
- A Divider Panel separates the computer/battery from the transformer, minimizing the transformer's heat impact on the battery ... cooler
- Only One Electrical Plug to the wall outlet reduces nuisance tripping of circuit breakers.

# "What happens when I push the button?" "What do the lights mean?"

Turn on Red Power Switch.

Green light glows as long as the Red Power Switch is turned on. Power is now on inside the laptop cart.

Always-On Electrical Outlet stays on as long

as the Red Power Switch is on. (see below) Left alone, the Brain will automatically turn on the **Yellow** light, which

Mode **Button**  Green

means that all power is being sent to charge the computer batteries.

= Power On

**Yellow** — = Power to the all the laptops



Amber = 2 Auxiliary Outlets ONLY

Press 1x Yellow Light comes on, all laptops charging

Press 2x 1st Blue Turbo Light comes on. All available power diverted to Power Strip A

Press 3x 2nd Blue Turbo Light comes on. All available power diverted to Power Strip B

Press 4x 3<sup>rd</sup> Blue Turbo Light comes on. All available power diverted to Power Strip C

Press 5x Amber Light comes on. All available power diverted to the 2 Auxiliary Monument Outlets ONLY - no charging

Press 6x Reverts to Green Light indicating power in the cart



# **Always-On Electrical Outlet**

Under the Brain, accessible from the rear of the cart, is one unique Electrical Outlet, rated for 1 Amp. This outlet is for a Wireless Access Point.



The Wireless Access Point's power cord can be routed through the cart at the side cord-pass-thruhole, opposite the cart's power cord. Remember, the outlet is maximum 1 Amp, only.

**ELECTRICAL:** Avoid sparks. Avoid arcing Always turn OFF the power to the cart before plugging IN or OUT!

**ELECTRICAL:** For Safety Purposes, make sure all electrical components do not exceed the the maximum load rating of 12 amps.

**ELECTRICAL:** Risk of electrical shock. Do not plug the power cord into another extension cord or relocatable power tap.

**ELECTRICAL:** The Power Bars inside the laptop cart are only for charging laptop computers. Any other use may cause an overload for the Power Management System, causing the "Brain" to shutdown, resulting in the LED lights flashing on and off. To reset the Brain, turn off the main power switch, unplug the non-laptop computer, then turn the main switch back on.

**CAUTION:** Ventilation is critical for laptop computer carts to operate correctly, providing the appropriate airflow so that heat-buildup is minimized during the battery-charging process, with the computers turned OFF. Be sure each laptop computer is turned OFF before plugging into the cart.

**CAUTION:** Do Not block the ventilation holes on the cart. Proper air flow is required for safe operation of equipment.

CAUTION: Cart with computers should be keep in a room with a maximum temperature not to exceed 77° F or 25° C.

**CAUTION:** Maximum weight of accessories on top of cabinet is 25 pounds.

CAUTION: Avoid loading equipment in the cart in a uneven fashion. Uneven weight distribution could cause a hazardous condition.

# **How Does a Laptop Computer Manage Heat?**

To manage the heat stress of the battery, computer engineers include sophisticated battery management functions in the design of the computers. They can be found in two places: the external charger & internal to the notebook computer itself. The transformer converts the alternating current from the wall socket to a lower voltage direct current. Besides charging the notebook's battery these "bricks" as they're sometimes called, can supply enough electricity to operate the laptop and charge the battery simultaneously.

Deep inside the computer a dedicated microcircuit continuously monitors and manages the charging current, voltage and temperature of the battery. If the temperature of the battery exceeds limits, the microcircuit will stop charging the battery until the temperature drops to acceptable levels.

Keeping the battery cooler while charging allows the battery to charge faster.

# Cable Management System ... "The Cable Clutter Closet"



Thread the Velcro strap through the two slots directly behind the front computer slot, tacky side out, as shown.



Wrap the Cord Set with both cables around the adapter as shown, leaving 16" for computer plug, 8" for power plug. Lay the wrap on the Velcro strap as shown.



Buckle the Velcro strap around the wrapped cord set, cinching it down against the shelf. Velcro Buckle locks into place as shown.



directly above the cinched down cord set. Plug cable drops into the computer slot in front



Thread computer plug cable through the holePull the computer plug cable through the front slot and Thread the cable through the loops so that the plug is in the correct position to attach to the computer, as shown. Below is a detail of the divider panel showing the loops.

# "A place for everything, and everything in its place."

You know from personal experience the value of keeping your closet neat and organized. You know exactly where everything is when you open the door. So Bretford developed a "closet" for all the cords and cables associated with Netbook Computers.

Your Intelligent Netbook Cart has its own "Cable Clutter Closet" – a lockable compartment at the back of the cart especially designed to keep all the cables away from the computers and the hands that retrieve those computers from the cart.

The interior **Divider Panel** separates the cart so that 75% of the cart is dedicated to the computers in the front and 25% is dedicated to cables and power adapters in the back. Holes in the Divider Panel allow the computer connector cables to pass thru and be easily connected to the computers for charging.

By separating the computer from its power adapter, you minimize the amount of heat beside the computer battery, allowing it to charge at a lower temperature,

#### ... allowing the battery to charge faster.

Only the **IT Administrator** has access to the Cable Clutter Closet, since it has its own programmable Combination Padlock.

**Full view of the closet** – you immediately know if something is missing or out of place.

Special Cable Tie-Off Slots for the power adapters and their cables provide nesting for cordsets. Comes with Laser Cut ID Numbers for coding the computers, the slots and the cable sets.

Typically, every netbook computer comes with 12 feet of cable, plus the adapter  $12 \times 42 = 504$  feet of cable that has to go somewhere

# **Divider Panel with Cable Slots**

**Laser Cut ID Numbers** 

inside the Cable Clutter

Closet and on the front

shelves show you how to

use the A-B-C Code for

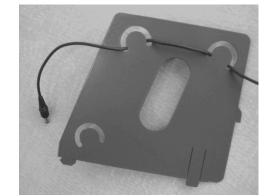
optimal advantage of the

Brain and its Turbocharge

Mode.

Each snap-in Divider Panel features slots for routing the computer plug cable to the plug-in spot on the computer – high or low, left or right. And the panel has a hole for air flow.







# INTELLIGENT



**Nethook Computer Cart** 

## NETBOOK42

42 Netbook Computers in Vertical Slots

#### **Power Module**

keeps the constant flow of power from a single wall outlet charging batteries where needed

## **LED Lights**

on the Power Module keep you informed at a glance of what's going on in the cart



#### **Directional Locking Casters**

can be locked as a rigid caster for easy rolling down the hallway, unlocked to swivel for easily getting into tight spaces

#### **Laser-Cut Identification Numbers**

on both front slots & back shelves help keep computers and their cable sets in their place and immediate recognition if one goes missing

#### **Cord Winder**

on the side panel provides easy access up high, so that the cord does not get crimped under the

**Cable Clutter** Closet keeps the cable sets and adapter bricks organized, everything in its place, with easy access

# **Back View**

# 3-point Security

on both front & back doors with programmable combination padlocks, plus recessed doors make it difficult to pry them open



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