



# INTELLIGENT DOCKING STATION USERS MANUAL

**PART NUMBER: 450-4111**  
*PANASONIC CF53 TOUGHBOOK COMPATIBLE*

**AN ISO 9001:2008 CERTIFIED COMPANY**

## DESCRIPTION

Rugged in-vehicle "intelligent" docking station with internal port replicator/power supply with auto shutdown/auto activation capability.

## WARNINGS

Do not use bolts longer than 3/8" to bolt docking station to clevis or pedestal mount. Only use 1/4"-20 x 3/8" grade 8 bolts to secure dock to clevis/pedestal mount. Consult vehicle manufacturer prior to installation for air bag deployment zones. Do not install this unit in the driver or passenger air bag deployment zones.

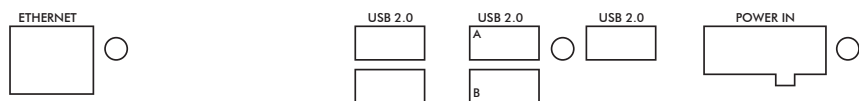
Only use appropriate mounting hardware that can securely support the weight of this docking station and computer. Failure to comply can result in serious injury or death.

## FEATURES

1. INTERNAL PORT REPLICATOR
  - A. (6) USB 2.0 ports
  - B. Ethernet port 10/100 BASE\_T
2. INTERNAL POWER SUPPLY
  - A. 15.7v DC output charging circuit
  - B. User selectable auto shutdown timer
  - C. Microprocessor control
  - D. Power Indicator
  - E. Docked Indicator
  - F. Low Volt Indicator
  - G. Auto Shutdown Warning Indicator
  - H. Auto Shutdown output trigger

## PORT DIAGRAM

Diagram of the port layout located on the bottom of docking station.



## LIMITED WARRANTY

Kodiak Mobile by Jotto Desk will repair our docking station product with new or rebuilt parts, free of charge in the U.S.A. for three (3) years from the date of original purchase in the event of a defect in materials or workmanship. This warranty includes the metal case and internal power supply / port replicator circuitry, but excludes all other options or accessories, which are covered by the respective manufacturer of those options or accessories.

This warranty is extended solely to the original purchaser. A purchase receipt or other proof of date of original purchase and a Kodiak Mobile SO# will be required before warranty performance is rendered.

This warranty only covers failures due to defects in materials or workmanship which occur during normal use. It does not cover damage which occurs in shipment or failures which are caused by products not supplied by Kodiak, or failures which result from alteration, accident, misuse, introduction of liquid or other foreign matter into the unit, abuse, neglect, installation, maladjustment of consumer controls, improper maintenance, modification or service by anyone other than Kodiak Mobile by Jotto Desk or an authorized Kodiak Mobile by Jotto Desk Service Authorized Dealer, or damage that is attributable to acts of God.

### Exclusions and Limits:

There are no other express warranties except as listed above.

KODIAK MOBILE BY JOTTO DESK SHALL NOT BE LIABLE FOR LOSS OF DATA OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE.

If you experience a problem with your Kodiak Mobile by Jotto Desk product during or after your warranty period please contact us at 877.455.6886.

## DOCKING STATION DIAGNOSTICS

The KDCF53 120w Power Supply board has built-in power indicator LED's that can help you determine if the docking station is functioning properly. To access the required area of the board, remove the access panel, located on left side of the dock. The indicators are color coded and indicate if specific functions are either receiving input power or producing output power.

### Example:

If the +12vDC ignition circuit is not connected or the ignition fuse is blown the Orange LED will not be illuminated. By simply observing the state of the LED you can quickly determine if the docking station is receiving voltage or not.

### LED INDICATOR COLOR CODES:

INPUT POWER	LED COLOR	REF
+12vDC (un-switched power, or A+)	RED	D1
+12vDC (switched, or ignition power)	ORANGE	D7

### OUTPUT POWER

+15.7vDC (laptop charging circuit)	GREEN	D6
+5vDC (USB, Ethernet power circuit)	YELLOW	D2

All four LED's should be illuminated when the docking station is powered up. If you don't see all four LED's there is a situation that is preventing the docking station from functioning properly. Please use the chart below to determine the cause and effect of the described situations:

1. Laptop computer won't charge. Check to see if the GREEN LED is illuminated. If it's not, check Output Fuse.
2. Docking station turns on for a brief moment, then shuts down. Check to see if the ORANGE LED is illuminated. If it's not, check the Ignition Fuse and check to be certain 12v is present at this circuit. *(This condition may vary depending on the settings of your shutdown timer. The docking station will power up and then start the shutdown timer. Docking station will remain powered up for the pre-set time then shut down if the Ignition Fuse is blown.)*
3. Docking station will not power up at all. Check to see if the RED LED is illuminated. If it's not, check Main Power Fuse and check to be certain that 12v is present at the circuit. **Laptop must be docked.**
4. Ethernet will not function. Check to see if the YELLOW LED is illuminated. If the LED is illuminated and the Ethernet will not work, you may need to install the Ethernet driver into your computer. *Drivers are available on the Kodiak web site. UPDATE DRIVER TO INTERNET*

## SPECIFICATIONS

### MOUNTING:

Mounting Pattern (Standard)	4.250 x 2.000 3.175 x 3.175
Dimensions:	13.1W x 11.8L x 1.5H
Weight:	6.2 lbs.

### GENERAL:

Construction:	18g welded steel
Keyed Alike:	Yes
Finish:	Powder Coat - Black/Silver

### FIRMWARE:

Revision:	6 <b>*Laptop must be docked for docking station to power.</b>
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### POWER SUPPLY:

Input Voltage:	9v - 16v DC
Output Voltage1:	15.7v DC regulated @ 120W
Output Amp (Charging):	10A Max
Output Trigger:	400mA Max
Surge Suppression:	Yes
Input Fused (BATT):	15A ATM
Input Fused (IGN):	7.5A ATM
Output Fused:	10A mini blade
Reverse Voltage Protection:	Yes
Avalanche Voltage Protection:	Yes
Un-Switched 12v Access:	Yes (keyboard light)

### PORT REPLICATOR:

Noise Filtering:	Yes
EMI Filtering:	Yes
USB:	USB, type A 2.0
Ethernet:	RJ45

## FUNCTION OVERVIEW

### GENERAL:

The docking station will only power up with laptop docked due to firmware revision 6. The Kodiak Mobile KDCF53 intelligent docking station will automatically power and charge the notebook computer. It is not necessary to push any buttons on the control panel for unit activation under normal conditions. Simply turning the vehicle ignition to accessory or starting the vehicle will activate the docking station and any external devices that are wired to the output trigger of the docking station. Turning the key OFF will automatically shutdown the docking station and any external devices. Under special circumstances it may be desirable to control the docking station manually. Use the buttons on the front control panel to manually power and shutdown the docking station.

**OUTPUT TRIGGER:** (This optional feature is not required for standard function) The KDCF53 docking station has an output trigger available on the power cable supplied with the unit. This trigger can be used in conjunction with a relay to control the power of other devices such as modems and GPS units. The functionality is as follows: When the docking station is ON the external units are ON. When the docking station powers OFF the external units power OFF.

**AUTO SHUTDOWN TIMER:** (This option can be enabled or disabled by the user) This docking station has an integrated timer circuit that can be enabled. The shutdown times are user controlled by setting the DIP switch on the side of the docking station. The timer controls the output trigger as well as the main docking station power. Once the ignition switch of the vehicle is shut off the docking station will begin it's countdown. Five minutes prior to reaching the set time the Auto Shutdown warning LED on the control panel will begin to flash. The user has the option to allow the docking station to power down or to reset the countdown by pressing the Reset button on the control panel.

**LOW VOLTAGE MONITORING:** (This option can be enabled or disabled by the user) The KDCF53 docking station has an integrated low volt detection circuit. This feature monitors the vehicle battery voltage when enabled. If the vehicle battery voltage drops below 10.5v the docking station will flash the Low Volt indicator on the control panel and automatically shut down the docking station along with any external devices that are tied to the output trigger. The docking station automatically disables this feature if the vehicle ignition switch is in the ON position or if the vehicle is running.

If a Low Volt condition is detected the docking station will flash the Low Volt indicator until the condition is corrected. Once corrected press and hold the Reset button for a few seconds and the unit will power up. If the condition still exists the docking station will immediately detect the condition and power back down. If this occurs, start the vehicle and repeat this step.

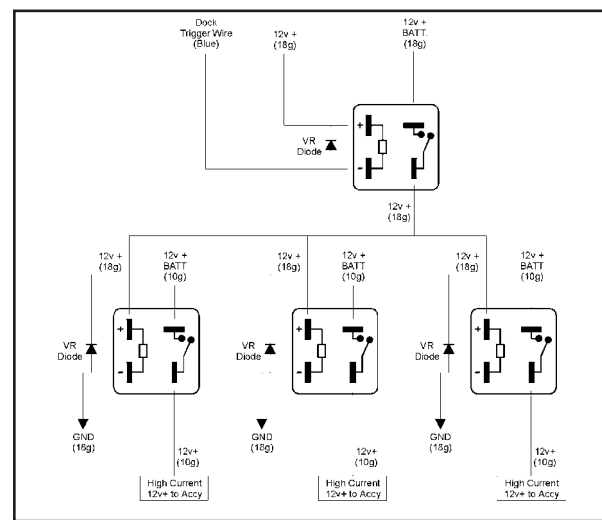
### CONTROL PANEL DESCRIPTION:

Master Power Button:	Main docking station power, on and off.
Power LED:	Indicates power on and charging
Docked LED:	Indicates mate between dock & computer.
Low Volt LED:	Indicates vehicle battery is weak.
Auto Shutdown Warning LED:	Indicates Auto Shutdown is about to occur.
Reset Button:	Resets Auto Shutdown timer and Low Volt condition.

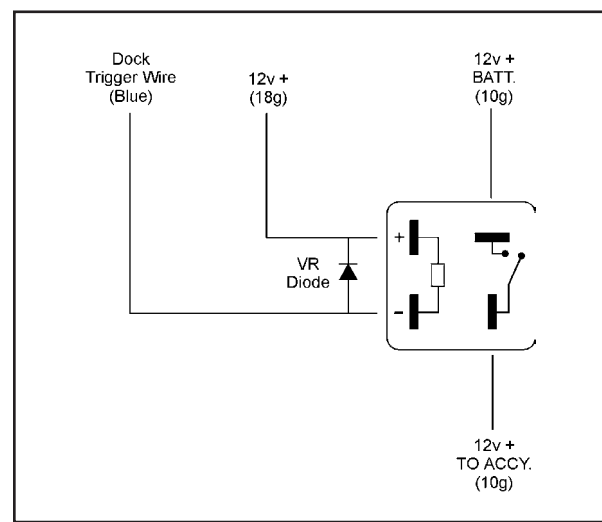
## OUTPUT TRIGGER WIRING DIAGRAM

The output trigger on this docking station is to be used in conjunction with a relay. The output trigger functions as a negative ground with a 400mA maximum load. See block diagrams.

### MULTIPLE DEVICE SCHEMATIC [Block Diag. 2]



### SINGLE DEVICE SCHEMATIC [Block Diag. 3]

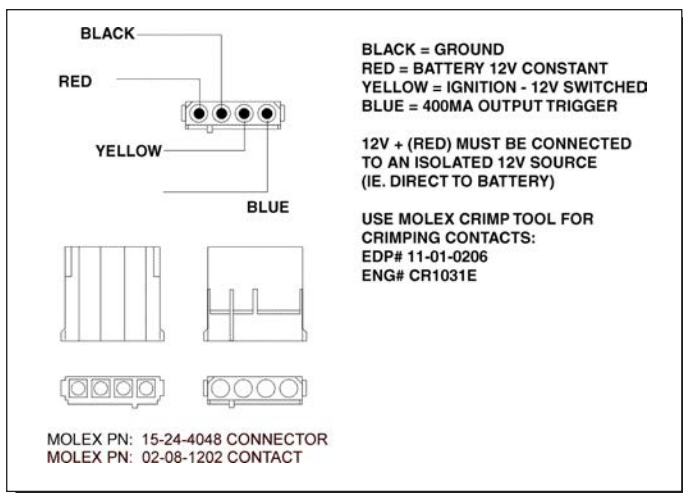


## WIRING INSTALLATION

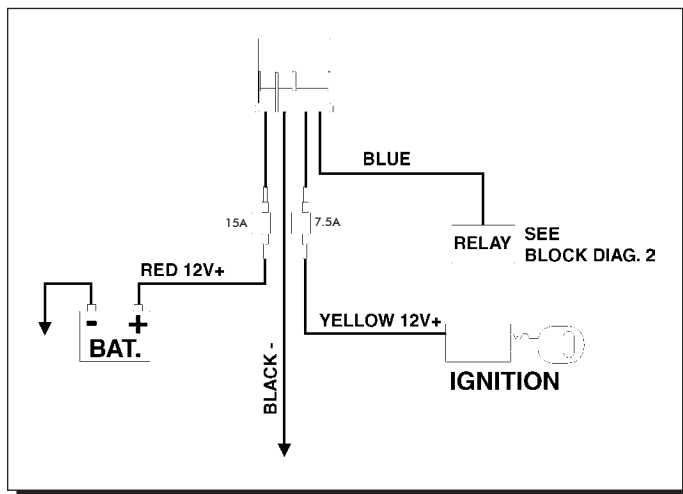
RED: Constant 12vDC +  
 YELLOW: Switched 12vDC+  
 BLACK: Ground -  
 BLUE: Auto Shutdown Trigger (400mA max. output)  
 [Optional - See block diag. 2 or 3]



## POWER CONNECTOR PINOUT



## POWER HARNESS INSTALLATION [Block Diag. 1]



## AUTO SHUTDOWN SWITCH SETTINGS

### TIMER SETTING

DIP 1	DIP 2	DIP 3	RESULT
ON	ON	ON	DISABLE
ON	ON	OFF	30 MIN
ON	OFF	ON	60 MIN
ON	OFF	OFF	90 MIN
OFF	ON	ON	120 MIN*
OFF	ON	OFF	200 MIN
OFF	OFF	ON	300 MIN
OFF	OFF	OFF	CONSTANT ON**

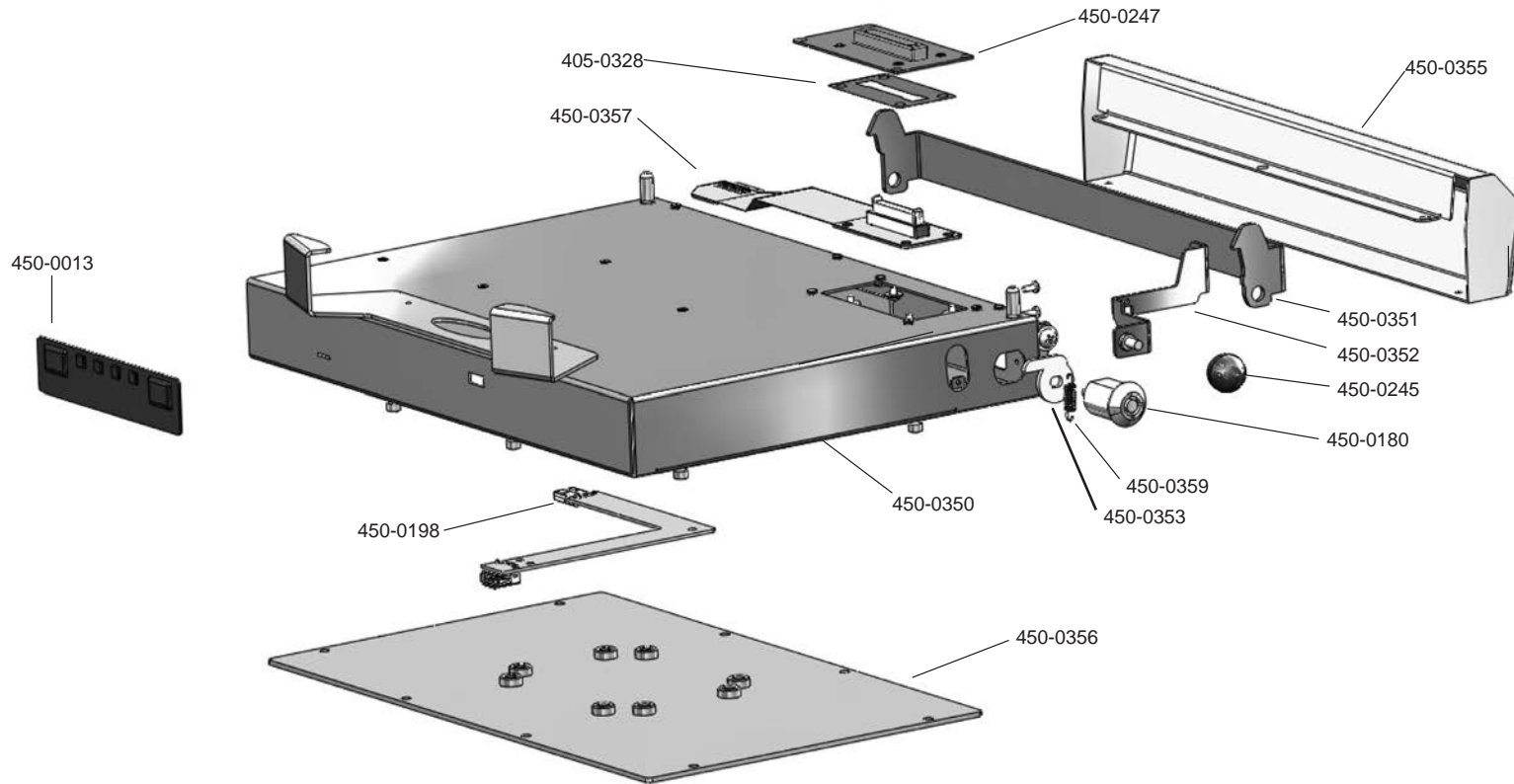
### LOW VOLTAGE MONITORING

DIP 4	RESULT
ON	ENABLED*
OFF	DISABLED

\* FACTORY DEFAULT

\*\* The "Constant ON" setting will turn the docking station ON with the ignition switch, but will never turn it off. This was designed for Fire Departments and emergency response vehicles who wish to leave the docking station ON all the time and retain the low voltage monitoring feature.

## PART IDENTIFICATION: KDCF53



### PARTS LIST

PART NO:	PART DESCRIPTION	QTY. REQ.
450-0013	Front Control Panel	1
450-0328	PCB InsulSlide Tray	1
450-0357	Interface PCB Assembly	1
450-0247	Interface Riser	1
450-0355	Rear Cover	1
450-0351	Rear Clamp	1
450-0352	Lock Bar	1
450-0245	3/4" Black Knob	1
450-0180	Lock	1
450-0359	Extension Spring	2
450-0353	Lock Cam	1
450-0350	CF53 Pan	1
450-0198	Front Access USB	1
450-0356	Base Plate	1

### PARTS LIST - NOT SHOWN

PART NO:	PART DESCRIPTION	QTY. REQ.
450-0058	Key Set	1
450-0104	Power Cable	1
450-0199	15 Amp Fuse	1
450-0063	7.5 Amp Fuse	1

## **CUSTOMER SERVICE**

If you have any questions or require additional information please contact Customer Service at 877-455-6886, Monday through Friday, 8:00am - 5:00pm CST.

## **TECHNICAL SUPPORT**

Kodiak Mobile by Jotto Desk offers technical support for all of our products Monday through Friday, 8:00am - 5:00pm CST. You can contact us at 877-455-6886 or by email: [technicalsupport@jottodesk.com](mailto:technicalsupport@jottodesk.com)

<http://jottopublicsafety.gojotto.com/docking-stations.html>

The Kodiak Mobile by Jotto Desk web site, is host to many technical pages and specifications to help trouble shoot installation and post installation problems. Visit the Kodiak Downloads area for 'FAQ' for frequently asked questions, additional technical information as well as Ethernet dock software drivers. Visit <http://jottopublicsafety.gojotto.com/docking-station-downloads> for this and other information on our products.



**KODIAK MOBILE BY JOTTO DESK**  
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209 W. Easy St., Rogers, AR USA 72756  
Customer Service: 877.455.6886

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