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# Basic User Manual

## KS-60 2.0 USB WiFi Antenna

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## 1. Introduction

Thank you for purchasing the Scout KS-60 2.0 USB WiFi antenna, a professional marine antenna with 100% waterproof technology (learn more on [www.scoutantenne.com](http://www.scoutantenne.com)). The KS-60 2.0 is specifically designed for the marine environment and for outdoor installation, to allow long range WiFi connectivity for any computer with a USB port.

The KS-60 2.0 is compatible with the following operating systems:

- Microsoft Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10
- Apple Mac OS X 10.4, 10.5, 10.6, 10.7, 10.9, 10.10
- Linux v2.6.13

**Attention: do not plug in the KS-60 2.0 to the USB port of your computer before you have installed the drivers.**

## 2. Installing the KS-60 2.0 on Windows

To operate the KS-60 2.0 on Windows you need first to download the drivers and the Mediatek Wireless Lan Utility, following the steps below.



**If the operative system installed on your computer is Windows Vista, Windows 7, Windows 8 or Windows 10 and you are connected to the internet you can skip the following procedure and directly plug in the KS-60 2.0 to the USB port, it will detect the driver automatically and start the download.**

*Step 1* - go to [www.scoutantenne.com](http://www.scoutantenne.com) > Products > WiFi Antennas > KS-60 2.0 and select the Windows driver from the driver list (Figure 1).



Figure 1

*Step 2* - save the file to your desktop and open it, then launch the Setup.exe (Figure 2).

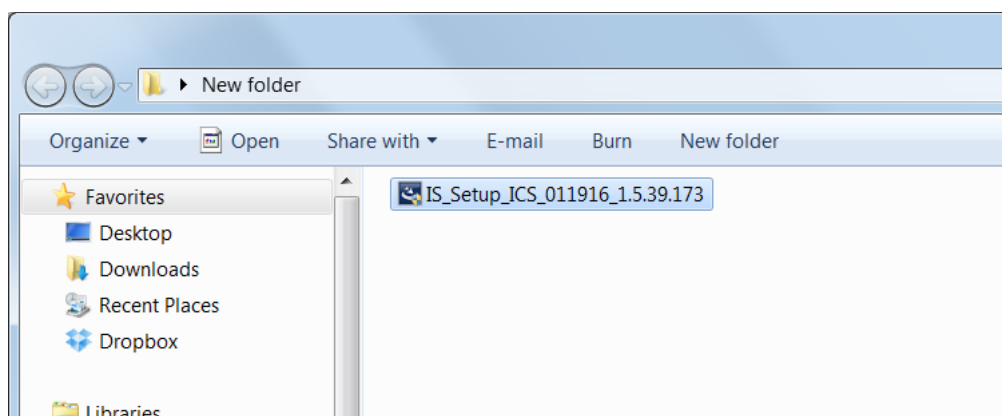


Figure 2

**Step 3** - press “Next” to start the installation process, that takes only few seconds. When the installation is finished you need to Restart the computer (Figure 5).

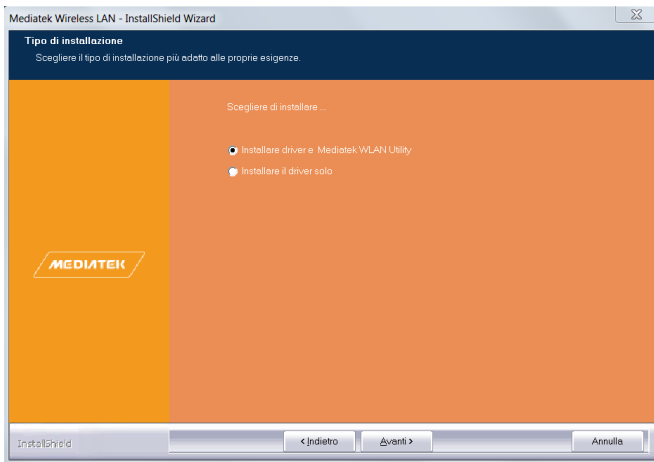


Figure 3

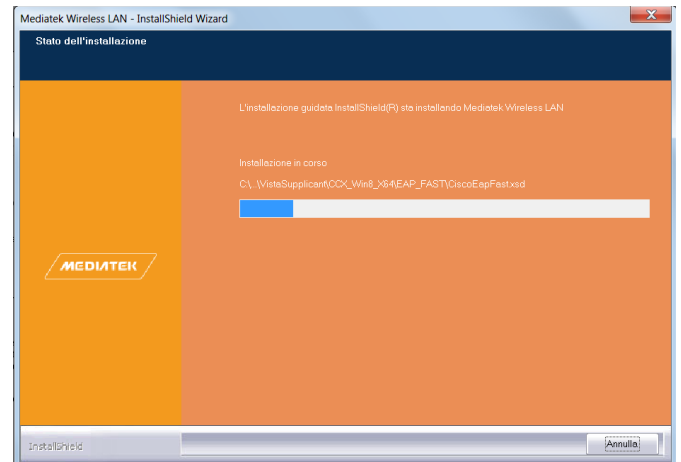


Figure 4

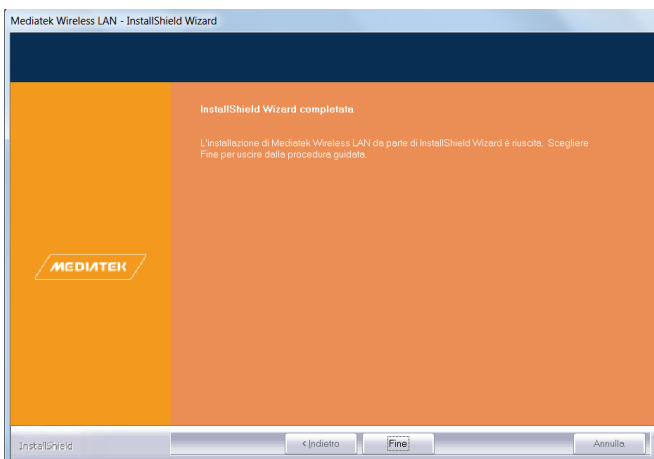


Figure 5

**Step 4** - once the computer has fully rebooted, plug in the KS-60 2.0 to the USB port. A pop up window will inform you that the device driver software is going to be installed (Figure 6). When the installation is completed another pop up window informs you that the device driver software has been installed successfully (Figure 7). The KS-60 2.0 is now ready to use.

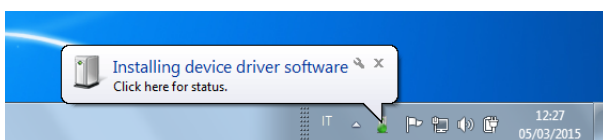


Figure 6

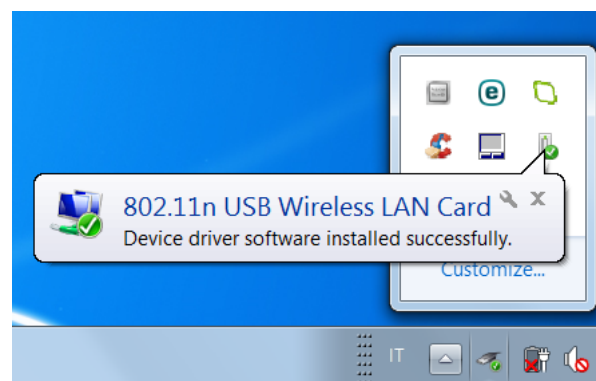


Figure 7

### 3. Operating the KS-60 2.0 on Windows

To operate the KS-60 2.0 on Windows you can use either the Windows Wireless Connection Manager (Figure 8) or the Mediatek Wireless LAN Utility, which you downloaded together with the driver (Figure 9). Both options are fine, just consider that the Mediatek Wireless LAN Utility offers more features than the tool supplied by Windows.



Figure 8

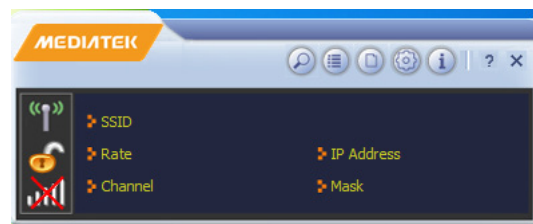


Figure 9

**Attention:** to avoid confusion with using the KS-60 2.0 is always better to disable the internal wireless adaptor on your laptop. You can do it through the Network and Internet functions of the Control Panel (Figure 10).

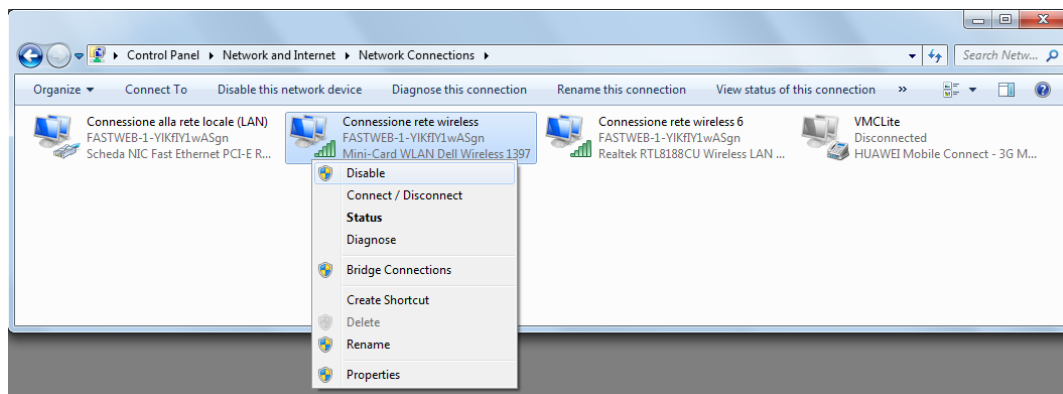


Figure 10

### Operating the KS-60 2.0 with the Windows Wireless Connection Manager

Click on the Wireless Networks icon in the task bar and a list of available wireless networks will be displayed. Your laptops internal wireless adaptor is usually named “Wireless Network Connection” and the KS-60 2.0 will automatically be named “Wireless Network Connection 2” or possibly another number if other adaptors have been used previously.

It is always a good idea to rename this connection by going in to the “Network and Sharing Center” and change its name to something more meaningful (for example “KS-60 2.0”), so that you can be certain of which wireless adaptor you are using (Figure 11).

Select the network you would like to connect by clicking on it. If the network lists an encryption type or Network authentication you will need a network key or password to gain access.

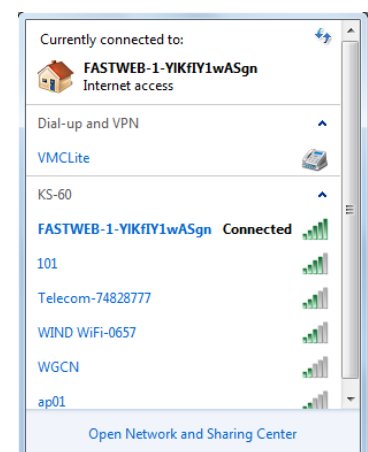




Figure 11

## Operating the KS-60 2.0 with the Mediatek Wireless LAN Utility

To connect to a wireless network you must run the “Mediatek USB Wireless LAN Utility” from the “All Programs” Start Menu, so that the Mediatek icon appears at the lower right hand corner of the computer screen. You must have your KS-60 2.0 connected to your PC’s USB port to open the utility. The utility will not open if it does not detect the antenna.

On the Mediatek main window (Figure 9) click on the Site Survey icon  to bring up a list of AP(s) picked up by the antenna. Each row contains the AP, network type, channel used, wireless mode, security status and signal strength (Figure 12).

Simply highlight the AP and click  “Connect”. If the AP is encrypted, you’ll be asked to enter the password for authentication as shown in Figure 13.

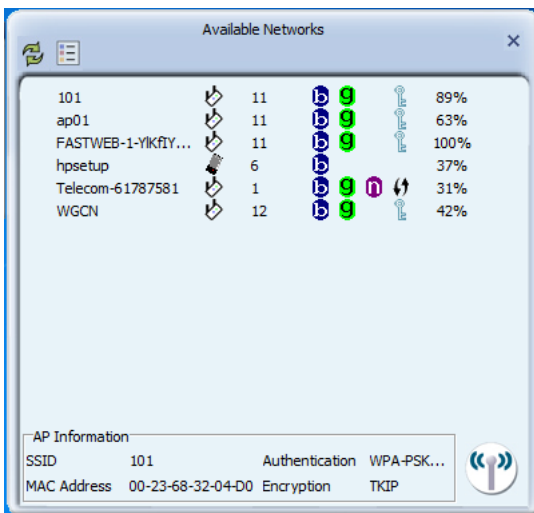


Figure 12

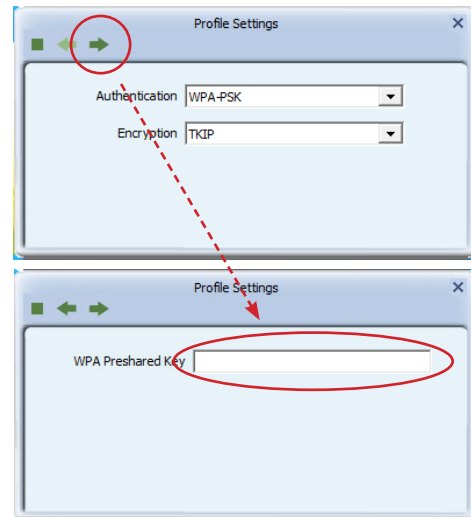


Figure 13

## Advanced Mediatek Wireless LAN Utility Features

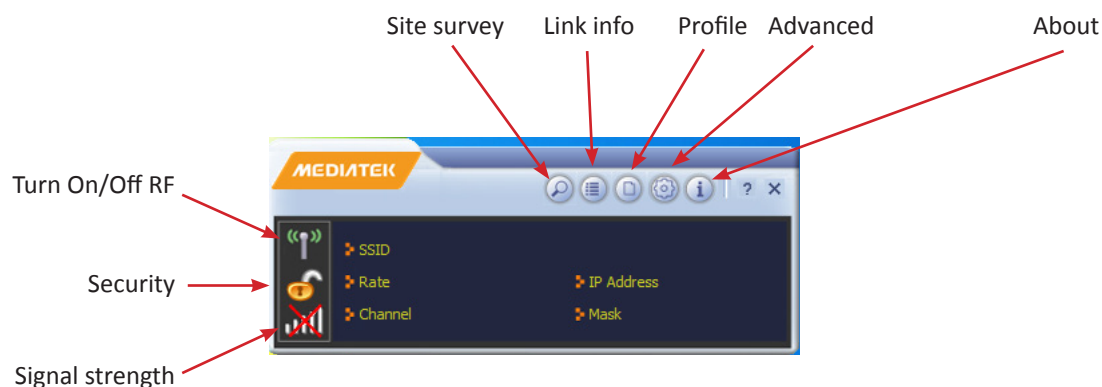


Figure 14

**Turn On/Off RF** - It is a toggle switch to turn on and off the antenna. When the RF is off, no wireless transmission and reception will take place.

**Security** - It is an indicator whether the wireless network is secured (lock closed) or unsecured (lock open).

**Signal Strength** - A five bar indicator of the signal strength. It shows the signal strength in terms of percentage when the mouse is over the signal strength icon.

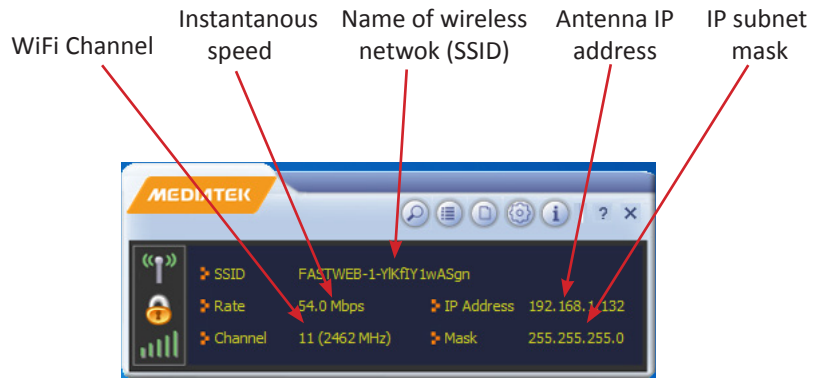


Figure 15

**Link Info** - The Link Information consists of the instantaneous Link Status, Throughput and Statistics of the antenna.

Link status

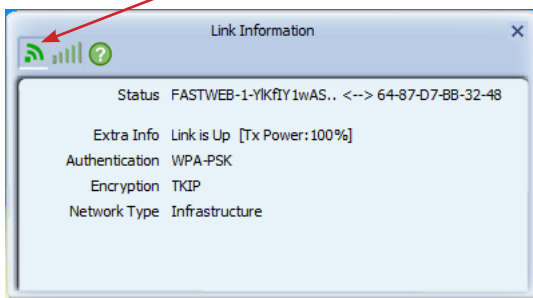


Figure 16

Throughput

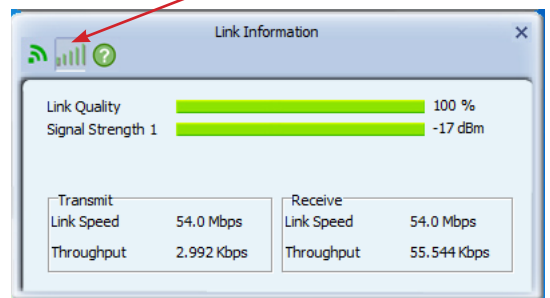


Figure 17

Statistics

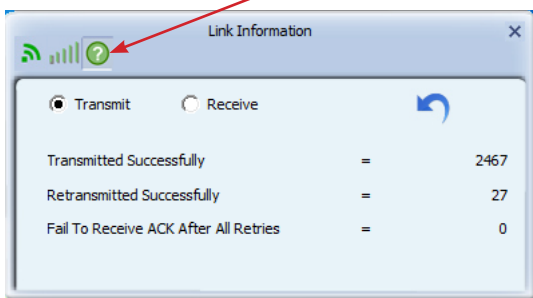


Figure 18

### 3. Installing the KS-60 2.0 on a Mac

To operate the KS-60 2.0 on a Mac you need first to download the drivers and the Mediatek Wireless Lan Utility, following the steps below.

*Step 1* - go to [www.scoutantenne.com](http://www.scoutantenne.com) > Products > WiFi Antennas > KS-60 2.0 and select the Mac driver from the driver list (Figure 19).



Figure 19

*Step 2* - save the file to your desktop and open it, then double click on the Installer.pkg. Follow the installation instructions as shown in Figure 20 and Figure 21.



Figure 20

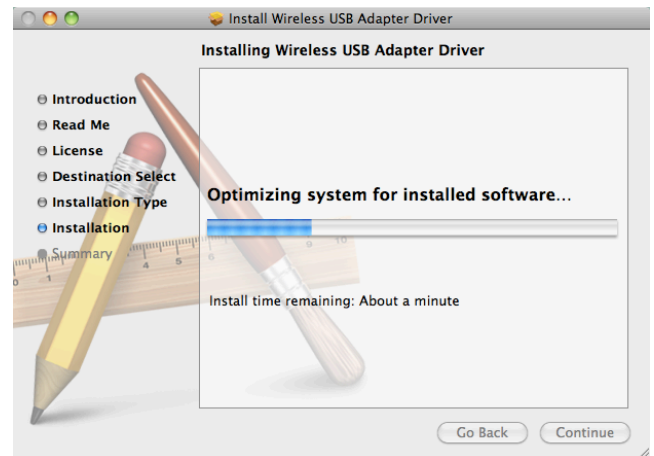


Figure 21

Once the installation is completed Figure 22 will appear. Restart the computer (Figure 22).

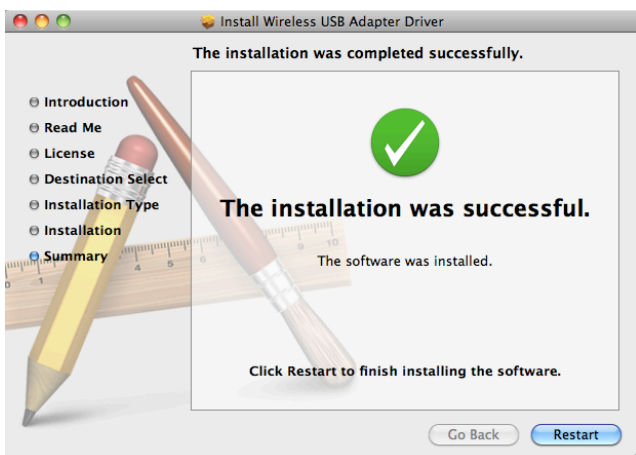


Figure 22

**Step 3** - once the Mac has restarted, plug the KS-60 2.0 in to the USB port and a new icon will appear in the Dock (Figure 23). You should be able to locate the Mediatek icon at the top right hand bar of your computer. Click on it and choose “Open Wireless Utility...”. The Mediatek Wireless Utility consists of several options, namely “Profile”, “Link Status”, “Site Survey”, “Statistics”, “Advanced”, “WPS”, “About”. The most important option is “Site Survey”, as it instructs the KS-60 2.0 to scan and display the wireless networks in your vicinity from which you may choose to connect.



Figure 23

**Step 4** - turn off your internal Airport wireless adaptor, then click on “Site Survey” to display a list of the wireless networks or wireless hotspots within range of your KS-60 2.0. If the network lists an encryption type or Network authentication you will need a network key or password to gain access. If “None” is listed, you can connect without providing a password (Figure 24). To connect to a network, select the network and click “Connect”.

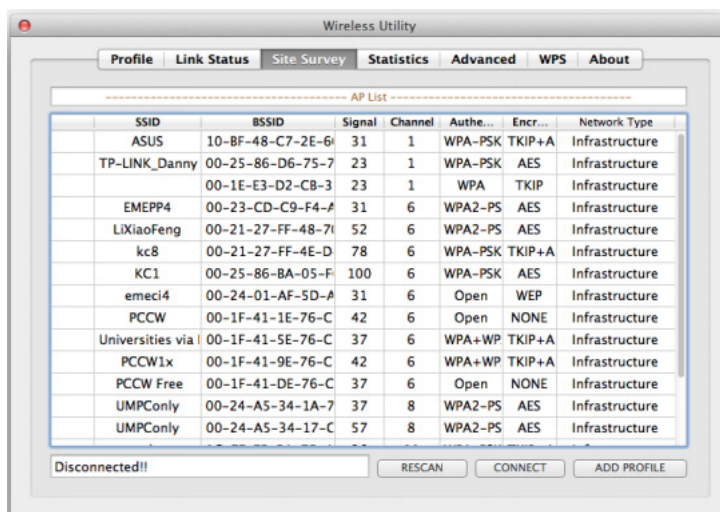


Figure 24

**SSID** - the name of the wireless network picked up by the KS-60 2.0.

**BSSID** - the MAC address of the wireless network. A MAC address is a unique birth mark of a network.

**Signal** - the signal strength in percentage.

**Channel** - the channel of the wireless network. If there are many wireless networks sharing the same channel, there is a fair chance of interference and you should choose the one with the strongest signal level. Otherwise change the wireless network to another channel if you are able to do so.

**Authentication** - either OPEN, or the security protocol that includes the popular WEP, WAP, WAP2 and 802.1x.

**Encryption** - NONE, TKIP, AES and TKIP+AES.

**Network Type** - Infrastructure or Ad Hoc. The former is the Access Point mode whereas the latter is peer to peer.



## KS-60 2.0 Technical Specifications

Frequency	2400-2500 MHz
Antenna gain	10 dBi
V.S.W.R.	< 1,5:1
Polarization	Vertical
Impedance	50 Ohm
Radiation	Omnidirectional
WLAN standards	IEEE 802.11b: 11 Mbit IEEE 802.11g: 54 MBit EEE 802.11n: 150 MBit
Operating Power	5.0V (USB only)
Transmit Power (EIRP)	35 dBm
Receive Sensitivity	-92dBm@11MBit -76dBm@54MBit -73dBm@HT20, -70dBm@HT40 @150MBit
Security	64/128bit WEP, WPA/WPA2, WPA-PSK WPA2-PSK (TKIP/AES)
Operating Temperature	-20° to 45°
Chipset	Ralink RT3070
Whip material	Fiberglass
Cable	5 m USB cable 2.0
Mounting	1" x 14 thread
Length	1,1 m
Weight	0,64 kilo

## KS-60 2.0 Suggested Mounts



**PA-3**

Four way solid nylon ratchet mount



**PA-30**

Four way stainless steel ratchet mount



**PA-40**

Stainless steel universal mount



**PA-43**

Two way chrome brass ratchet rail mount



**PA-81**

Stainless steel bracket with brass mount



**PA-41**

Detachable chrome brass rail mount



**PA-82**

Stainless steel masthead standoff bracket