

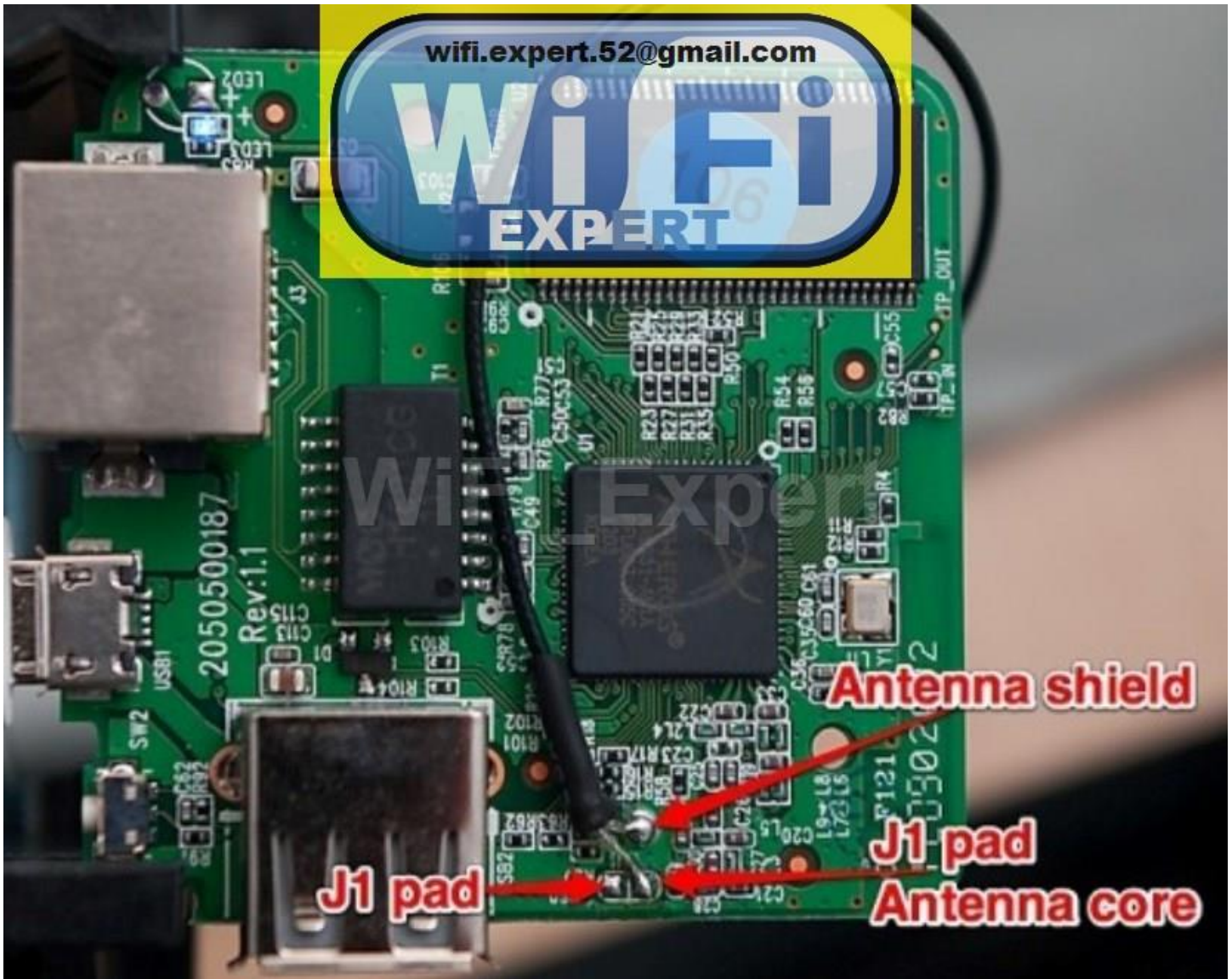
Thank you for purchasing Antenna Mod Kit for your TP 703N router. You will see a tremendous improvement in both the signal strength and performance of your wireless network after you complete the steps described in this tutorial.

First we will show you how to install the antenna for your router. Next we will teach you how to setup the DD-WRT firmware which will turn your \$60 router into a powerful, highly configurable \$600 router. Finally we will provide you with a tool that will help test the performance of your newly modified Router.



TP LINK 703N Antenna Installation Instructions:

1. Soldering required
2. Open the unit. Pry it open with a sharp object from the top.
3. Remove the PCB from the case.



Inside of the TP LINK 703N

You will be provided IPX Base for PCB mount but if you don't have the skills use the above image. Please note J1 jumper needs to be removed. This mod will not hold too long as the wire will put too much pressure on the soldering point, that is why we recommend doing the WiFi_Expert Mod.

4. Option A: Remove J1 resistor and solder the u.fl cable (as shown on the above picture)

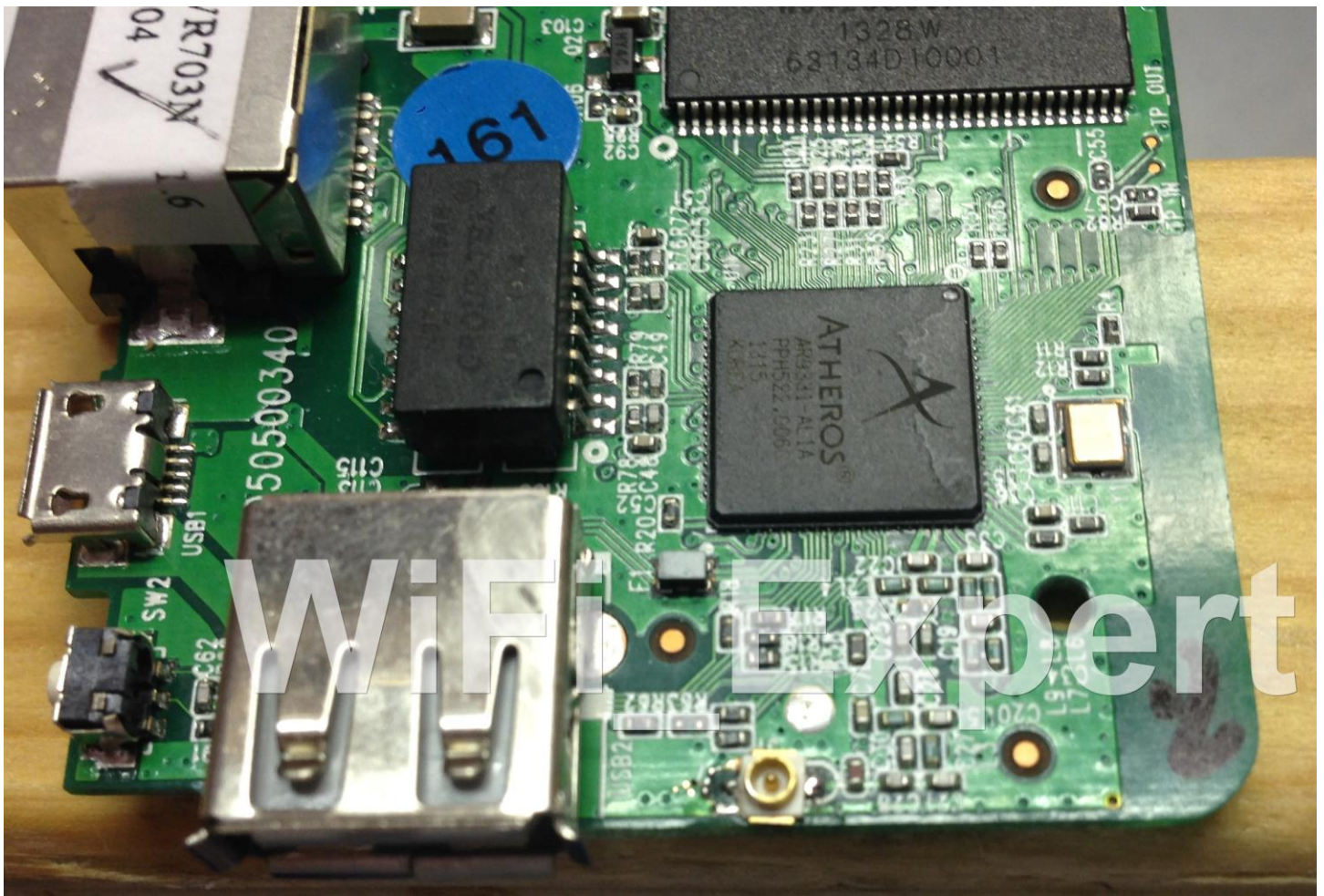
Option B: Remove J1 resistor, remove extra contact from the pad and solder the IPX base onto the PCB board. You need to use a tip of the knife to strip the plastic coating of the PCB board in order to get to shield contact (see below).



IPX mount falls right into place like it was meant to go there. (See below) The conductor must make contact with the left pad (middle pin). Soldering takes patience as the IPX base is very small and hard to keep in place. One trick is using a tiny drop of crazy glue.



The above image is before solder. Bottom Image is after.



5) Drill $\frac{1}{4}$ inch whole in the case, make sure to have enough clearance see below.

WiFi Expert



6. Tighten the nut in place and you are done.
Enjoy
Look at the signal strength after the mod is complete.



DD-WRT:

For optimal performance we recommend replacing the Linksys firmware with DD-WRT. This is a free third party firmware that will help turn your \$60 router into a powerful, highly configurable \$600 router.

703N ONLY: <http://www.dd-wrt.com/site/support/router-database>

DD-WRT Firmware installed on the Linksys WRT320N

dd-wrt.com ... control panel

Firmware: DD-WRT v24-sp2 (12/19/09) mini
Time: 22:31:01 up 10 min, load average: 0.00, 0.00, 0.00
WAN IP: 192.168.0.5

SetupWirelessServicesSecurityAccess RestrictionsNAT / QoSAdministrationStatus

RouterWANLANWirelessBandwidthSys-Info

Router Information

System

Router Name	DD-WRT
Router Model	Linksys WRT320N
Firmware Version	DD-WRT v24-sp2 (12/19/09) mini - build 13493M NEWD-2 K2.6 Eko
MAC Address	00:25:9C:48:B2:B1
Host Name	
WAN Domain Name	nc.rr.com
LAN Domain Name	
Current Time	Tue, 22 Dec 2009 22:31:01
Uptime	10 min

CPU

CPU Model	Broadcom BCM4716 chip rev 1
CPU Clock	354 MHz
Load Average	0.00, 0.00, 0.00

Memory

Total Available	27528 kB / 32768 kB	84%
Free	16224 kB / 27528 kB	59%
Used	11304 kB / 27528 kB	41%
Buffers	1392 kB / 11304 kB	12%
Cached	4228 kB / 11304 kB	37%
Active	844 kB / 11304 kB	7%
Inactive	762 kB / 11304 kB	7%

Help

[more...](#)

Router Name:
This is the specific name for the router, which you set on the *Setup* tab.

MAC Address:
This is the router's MAC Address, as seen by your ISP.

Firmware Version:
This is the router's current firmware.

Current Time:
This is time received from the ntp server set on the *Setup / Basic Setup* tab.

Uptime:
This is a measure of the time the router has been "up" and running.

Load Average:
This is given as three numbers that represent the system load during the last one, five, and fifteen minute periods.

dd-wrt.com

control panel

Firmware: DD-WRT v24-sp2 (12/19/09) mini

Time: 23:44:39 up 3 min, load average: 0.02, 0.02, 0.00

WAN IP: 192.168.0.56

Setup

Wireless

Services

Security

Access Restrictions

NAT / QoS

Administration

Status

Basic Settings

Radius

Wireless Security

MAC Filter

Advanced Settings

WDS

Advanced Wireless Settings

Advanced Settings

Authentication Type

☒ Auto
☐ Shared Key

(Default: Auto)

Basic Rate

Default

(Default: Default)

MIMO - Transmission Fixed Rate

Auto

(Default: Auto)

Transmission Fixed Rate

Auto

(Default: Auto)

CTS Protection Mode

☒ Auto
☐ Disable

(Default: Auto)

Frame Burst

☐ Enable
☒ Disable

(Default: Auto)

Beacon Interval

100

(Default: 100ms, Range: 10 - 65535)

DTIM Interval

1

(Default: 1, Range: 1 - 255)

Fragmentation Threshold

2346

(Default: 2346, Range: 256 - 2346)

RTS Threshold

2347

(Default: 2347, Range: 0 - 2347)

Max Associated Clients

128

(Default: 128, Range: 1 - 256)

AP Isolation

☐ Enable
☒ Disable

(Default: Disable)

TX Antenna

Auto

(Default: Auto)

RX Antenna

Auto

(Default: Auto)

Preamble

Long

(Default: Long)

Shortslot Override

Auto

(Default: Auto)

TX Power

185

(Default: 71, Range: 1 - 251mW)

Afterburner

Disable

(Default: Disable)

Bluetooth Coexistence Mode

Disable

(Default: Disable)

Wireless GUI Access

☒ Enable
☐ Disable

(Default: Enable)

Radio Time Restrictions

Radio Scheduling

☐ Enable
☒ Disable

(Default: Disable)

Help (build 13493M) - Advanced Wireless Settings - Mozilla ...

http://192.168.1.1/help/HTWirelessAdvanced.asp

AP Isolation

The default value is *Off*. This setting isolates wireless clients so access to and from other wireless clients are stopped.

TX Antenna / RX Antenna

Values are *Auto*, *Left*, *Right*, default value is *Auto*. This is used in conjunction with external antennas to give them optimum performance. On some router models left and right antennas may be reversed depending on you point of view.

Preamble

Values are *Long* and *Short*, default value is *Long*. If your wireless device supports the short preamble and you are having trouble getting it to communicate with other 802.11b devices, make sure that it is set to use the long preamble.

TX Power

This value ranges from 1 - 251 mw, default value is 28mw. A safe increase of up to 70 would be suitable for most users. Higher power settings are not recommended for users due to excess heat generated by the radio chipset, which can affect the life of the router.

Afterburner

The default value is *Off*. This should only be used with WRT54GS Models and only in conjunction with other Linksys "GS" wireless clients that also support Linksys "Speedbooster" technology.

Wireless GUI Access

The default value is *Enabled*. The setting allows access to the routers setup (GUI) from wireless clients. Disable this if you wish to block all wireless clients from accessing the setup pages.

Radio Times Restrictions

The *Radio Times Restriction* facility constitutes a time switch for the radio. By default, the time switch is not active and the WLAN is permanently on. Enable the time switch, if you want to turn off the WLAN during some hours of the day. Hours during which the WLAN is on are marked in green, while red indicates that the radio is off. Clicking on the respective hour toggles between on and off.

WMM Support

Enable support of Wi-Fi Multimedia feature. Configuring QoS options consists of setting parameters on existing queues for different types of wireless traffic. You can configure different minimum and maximum wait times for the transmission of packets in each queue based on the requirements of the media being sent. Queues automatically provide minimum transmission delay for Voice, Video, multimedia, and mission critical applications, and rely on best-effort parameters for traditional IP data.

Advanced Wireless Settings: TX/RX External Antenna adjustments, TX Power adjustments, etc...

WIFI Radar Scanner:

<http://www.metageek.net/products/inssider/> (free download)

The WIFI Radar Scanner will show the signal strength of your router. We recommend using it before and after installing the antennas to see the improvement of the signal strength. It can also show you which antenna position and router location can give you the best signal. The closer to -0db the better the signal, and the closer to -100db the worse.

