# User Manual of 11ac 1200Mbps Outdoor Access Point HWAP80-P48



This is the user manual of 11ac 1200Mbps Outdoor Access Point, which will approximate guide you how to set and apply the Outdoor Access Point, it provide a convenient graphical interface for network construction and maintenance person, as well as a user through a simple and accurate operation, and configuration management of the ceiling wireless access point.

### 1<sup>st</sup> Hardware Instruction

#### **AP** Setup





#### **AP Interface:**



RST: Reset Button, it make AP revert to default data after press it 15 seconds.

WAN/PoE: Gigabit WAN Port, connect with ADSL modem or Internet mainly. It will be LAN port under Outdoor Access Point and WiFi Repeater operation mode.

SMA Connector: have 2.4G and 5.8G, connect with 2.4G or 5.8G antenna.

### 2<sup>nd</sup>: Login

#### 1) Connect the Outdoor Access Point with computer

2) Configure the PC's local connection IP address as 192.168.188.X (X is number from 2 to 254), subnet mask is 255.255.255.0, follow P4 and P5 to finish.

连接
Disable
Status
Repair
Bridge Connections
Create Shortcut
Delete
Rename
Properties

P4 Setting of computer's IP address

	Connel			
ieneral Advanced	General			
Connect using:  Qualcomm Atheros AR8151 PCI-E Git  Configure	You can get IP settings assigned this capability. Otherwise, you no the appropriate IP settings.	d automatically if your network supports eed to ask your network administrator for		
This connection uses the following items:	Obtain an IP address autor	matically		
Client for Microsoft Networks	<ul> <li>Use the following IP address</li> </ul>	#		
File and Printer Sharing for Microsoft Networks	IP address:	192.168.188.10		
	Subnet mask:	255 . 255 . 255 . 0		
	Default gateway:	1		
Description	O Obtain DNS server address	s automatically		
Transmission Control Protocol/Internet Protocol. The default	Use the following DNS server addresses:			
wide area network protocol that provides communication across diverse interconnected networks.	Preferred DNS server:			
Show icon in notification area when connected	Alternate DNS server:			
Notily me when this connection has limited or no connectivity		Advanced		
0K Cancel		OK Cancel		

P 5 Setting of computer's IP address

3) Input 192.168.188.253 into IE browser, then pop up the login page, the default login user name: Admin,

Passwords: admin, pls do following P6

HIGH PERFORMANCE INTELLIGENT WIRELESS ROUTER/AP	
	▲ LOGBN
	数(钟标本(version) > V2-0-Build20151204090606

P6 Login

### 3<sup>rd</sup> : WEB GUI interface Setting:

#### 1) Status

After login, then P7 Device Status will be showed:



P7: Device Status

In this ceiling Outdoor Access Point, the default operation mode is AP mode.

Then in 2.4G Wireless Setting, GUI configuration page showed as below:

User can configure the SSID, password, band width, channel here, then Apply to finish.





5.8G Wireless Setting GUI configuration setting showed as P8:

P9 5.8G Wireless Setting

LAN Setting to configure the DHCP or Fix IP



P10 LAN Setting

AP location setting: can mark where the AP set up, and AP name as P11:



P11 AP Postion setting

#### 2) Wizard Configuration:

Click Wizard in Status page, will pop up following page to configure the operation mode:

There are four operation mode of this ceiling Outdoor Access Point, and there are explanation for each operation mode

for better application.



P12 Operation mode

#### 1. Gateway Mode:

Click Gateway mode, will pop up following pictures:

Pls choose the right WAN setting mode, then click next to continue.

🔓 Gateway Mode				5
First: WAN Settings	Second: Wireless	Third: Complete	1st	
	Static IP	PPPOE(ADSL)	DHCP	2nd
		t assage mode is DUCD Dispass slick		
	The curren	Laccess mode is DHCP, Please click i		
	Г			
	L	Back Nex	t 3rd	



Wireless Settings 2.4G/5.80	3				
2.4	4G Wireless Settings 1st		5.5	8G Wireless Settings 2nd	
2.4GHz WLAN Status	ON 2G wireless analyzer		5.8GHz WLAN Status	ON 5G wireless analyzer	
SSID	WirelessAP-2G-00		SSID	WirelessAP-5G-10	
Channel	auto	$\sim$	Channel	* 5.765 GHz (Channel 153) 🗸 🗸	
Encryption	WPA/WPA2PSK_TKIPAES	$\sim$	Encryption	WPA/WPA2PSK_TKIPAES	
Кеу	6666666		Кеу	66666666	



When click Next, then will complete the Gateway mode setting and show following picture:



P15 Complete the setting in Gateway Mode



When return to Status, the page showed as follow:

#### P16 Status in Gateway Mode

#### 2. WiFi Repeater mode

Click WiFi Repeater operation mode in Wizard, then following page will pop up, and choose the right SSID to bridge,

then next.

👆 Repeater Mode			5
First: Repeater	econd: Wireless Third: Com	nplete	
Wireless Repeater			
Wireless Repeater	2.4G 🗸	Repeater SSID	Scan AP
Authentication	none 🗸		2nd
	Back	Scan AP WirelessAP-2G-00 78.038D038A03 Channel: 7 eff R55: 44 Bin Encryption: WPA.WPAJPSC.TGPAAS WirelessAP-2G-00 78.038D0384A6 Channel: 7 eff R55: 43 dBm Encryption: WPA.WPAJPSC.TGPAAS WirelessAP-2G-00 R55: 432 dBm Encryption: WPA.WPAJPSC.TGPAAS WirelessAP-2G-00 Refrest	d

P17 Repeater Mode

After click Next button, then should configure the wireless settig as follow, then click Next to finish:

👆 Repe	ater Mode			∍
First: Re	peater	Second: Wireless	Third: Complete	
Wirele	ss Settings 2.4G/5.80	3		
	5.	8G Wireless Settings		
	5.8GHz WLAN Status	ON 5G wireless analyzer		
	SSID	WirelessAP-5G-10		
	Channel	* 5.765 GHz (Channel 153)		
	Encryption	WPA/WPA2PSK_TKIPAES		
	Кеу	66666666		
		E	ack Next	

P18 Wireless Setting in Repeater Mode

Click Return button, will back to Status, show Repeater mode data, show fail or success, and user can configure this

data in this page if required.



P19 Status in Repeater Mode

Pls note, when click wireless relay setting, following page will pop up, you can make change from here easy:

👆 Repeater Mode				€_
First: Repeater Se	cond: Wireless Th	nird: Complete		
I Wireless Deposter				
Wireless Repeater	2.4G	✓ Re	epeater SSID	Scan AP
Authentication	none	~		
	Back		Next	



#### 3. WISP Operation mode:

Click WISP operation mode in Wizard, then will pop up the configure page, pls set the WISP operation mode based on

the stepes showed in picture:

First: Repeater	Secor	nd: WAN	Third: Wireless	Fourth: 0	Complete	
	1st					
Wireless Repeat	er					
	Wireless Benester			2nd	Westered D 20 00	- C AD
	wireless Repeater	5.8G		Repeater SSID	WirelessAP-2G-00	Scan AP
	Authentication	WPA/WPA2PSK_TK	IPAES 🗸	Key	66666666	5th
		s	can AP		X	
		v	/irelessAP-2G-00			
		7	8:D3:8D:D3:84:D3 Channel: 7 RSS: -84 dBm Encryption: WPA/WPA3	PSK_TKIPAES	4th	
		v	/irelessAP-2G-00			
		7	8:D3:8D:D3:84:A6 Channel: 7 RSS: -83 dBm Encryption: WPA/WPA	Choice PSK_TKIPAES		
		v	/irelessAP-2G-00			
		7	8:D3:8D:D3:84:EE Channel: 7   RSS: -82 dBm Encryption: WPA/WPA3	Choice PSK TRIPAES		
		v	/irelessAP-2G-00		— v	
				Re	fresh	
			Back	Nevt	6th	

P21 WISP Mode

Configure the right WAN setting in WISP operation mode, then next.

👆 WISP Mode						5
First: Repeater	Second: WAN	Third: Wireless	Fourth: Complete	>		
	Static IP	PPPOE(ADSL)		DHCP	2nd	
	The curren	t access mode is DHCP,Plea	se click next to configu	re.		
		r	3rd			
		Back	Next			

P22 WAN setting in WISP mode

Configure wireless data showed as follow:

•	WISP Mode								∽
	First: Repeater	Second: WAN	Third: V	Vireless		Fourth: Cor	nplete		
					1st				
	Wireless Settings 2.4G/5.80	G							
	5.(	8G Wireless Settings							
	5.8GHz WLAN Status	ON 5G wireless analyzer							
	SSID	WirelessAP-5G-10		2nd					
	Channel	* 5.765 GHz (Channel 153)	$\sim$						
	Encryption	WPA/WPA2PSK_TKIPAES	$\sim$						
	Кеу	66666666							
					_				
		Ва	ICK			Next	bid		

P23 Wireless Setting in WISP mode

Then complete and back to status, will show the connection fail or success, then can configure the data based on

request:



P24 Status in WISP mode

Remark: When click WAN Setting, will pop up following picture:

↓↓ WAN setting		X
WAN access mode	PPPOE(ADSL) DHCP Static IP	
	Apply	

P25 WAN setting in WISP mode

#### 4. AP Operation mode:

Set the wireless data, AP Location info as required, then click next to continue and enter into LAN setting.

After LAN setting, complete the AP mode configuration and back to Status:

eless Settings 2.4G/5.8G         2.4G Wireless Settings         2.4G Wireless Settings         5.8G Wireless Settings         2.4GHz WLAN Status         ON       2G wireless analyzer         SSID       WirelessAP-2G-00         Channel       * 2.442 GHz (Channel 7)         Channel       * 5.765 GHz (Channel 153)	irst. Wireless	Second . LAN	ind.complete	
2.4G Wireless Settings       5.8G Wireless Settings         2.4GHz WLAN Status       ON       2G wireless analyzer         SSID       WirelessAP-2G-00       SSID       WirelessAP-5G-10         Channel       * 2.442 GHz (Channel 7)       Channel       * 5.765 GHz (Channel 153)       V	eless Settings 2.4G/5.80	5		
2.4GHz WLAN Status       ON       2G wireless analyzer         SSID       WirelessAP-2G-00       SSID         WirelessAP-2G-00       SSID         WirelessAP-2G-00       SSID         Channel       * 2.442 GHz (Channel 7)         Channel       * 5.765 GHz (Channel 153)	2.4	IG Wireless Settings	5.0	8G Wireless Settings
SSID     WirelessAP-2G-00     SSID     WirelessAP-5G-10       Channel     * 2.442 GHz (Channel 7)     Channel     * 5.765 GHz (Channel 153)	2.4GHz WLAN Status	ON 2G wireless analyzer	5.8GHz WLAN Status	ON 5G wireless analyzer
Channel * 2.442 GHz (Channel 7) Channel * 5.765 GHz (Channel 153)	SSID	WirelessAP-2G-00	SSID	WirelessAP-5G-10
	Channel	* 2.442 GHz (Channel 7)	Channel	* 5.765 GHz (Channel 153)
Encryption WPA/WPA2PSK_TKIPAES V Encryption WPA/WPA2PSK_TKIPAES V	Encryption	WPA/WPA2PSK_TKIPAES	Encryption	WPA/WPA2PSK_TKIPAES
Key 666666666 Key 66666666	Кеу	66666666	Кеу	66666666
	tion Information			
tion Information	APLocation		AP Name	

P26 Wireless setting in AP Mode

👆 AP Mode		
First: Wireless	Second : LAN	Third:Complete
LAN setting		
		Access Type Static IP DHCP
	_	
		Back Next

P27 LAN Setting in AP Mode



P28 Status in AP Mode

#### 3) Advanced Setting:

In advanced setting, user can check the Outdoor Access Point's firmware version, working status, 2.4G wireless, 5.8G

Wireless, LAN Status,

upgrade firmware, Reset...

Let's Click Advanced Setting in status page, will show return home, Setup Wizard which we showed before.

Let's shown mode in Device Status, 2.4G Wireless, 5.8G Wireless, Network and Management.

II Advanced Set	tings	
🔗 Return home	Status 2.4G Wireless Status 5.8G Wireless Status LAN Status	
Setup Wizard	Status	
Device Status	Software Version 2.0-Build20151210202321	
ad 2.4G Wireless	Hardware Version V5.0	
sal 5.8G Wireless	Uptime 6M53S	
Network		
Management		

P29 Device Status

Device Status: In this page, mainly to check the Outdoor Access Point's status in firmware version, 2,4G Wireless,

5.8G Wireless and LAN status:

H Advanced Set	ttings
ሸ Return home	Status 2.4G Wireless Status 5.8G Wireless Status LAN Status
😟 Setup Wizard	2.4G Wireless Status
Device Status	2.4G Wireless Status Enable
2.4G Wireless	SSID WirelessAP-2G-00
5.8G Wireless	MAC 78:D3:8D:D3:B4:61
Network	Channel 7
💾 Management	Connected Users 0 Client list

P30 2.4G Wireless Status

Return home Status 2.4G Wireless Status 5.8G Wireless Status LAN Status   Setup Wizard 5.8G Wireless Status 5.8G Wireless Status Enable   Lan Status 5.8G Wireless Status SSID WirelessAP-5G-10   Lan Status MAC 78:D3:8D:D3:B4:62 MAC 78:D3:8D:D3:B4:62   Network Encryption WPAWPA2_TKIPAES   Management Connected Users 0	1HT	Advanced Set	tings
<ul> <li>Setup Wizard</li> <li>5.8G Wireless Status</li> <li>Device Status</li> <li>2.4G Wireless</li> <li>3.8G Wireless</li> <li>SSID WirelessAP-5G-10</li> <li>MAC 78:D3:8D:D3:84:62</li> <li>Channel 153</li> <li>Channel 153</li> <li>Encryption WPAWPA2_TKIPAES</li> <li>Management</li> </ul>	ñ	Return home	Status 2.4G Wireless Status 5.8G Wireless Status LAN Status
Image: Device Status       5.8G Wireless Status Enable         SSID       SSID WirelessAP-5G-10         MAC       78:D3:8D:D3:84:62         Channel       153         Channel       153         Encryption       WPAWPA2_TKIPAES         Management       Connected Users 0	٢	Setup Wizard	5.8G Wireless Status
aul     2.4G Wireless     SSID WirelessAP-5G-10       sul     5.8G Wireless     MAC 78:D3:8D:D3:84:62       Channel     153       Network     Encryption WPAWPA2_TKIPAES       Management     Connected Users 0		Device Status	5.8G Wireless Status Enable
Staff     5.8G Wireless     MAC 78:D3:8D:D3:84:62       Channel 153     Channel 153       Network     Encryption WPAWPA2_TKIPAES       Management     Connected Users 0	zıl	2.4G Wireless	SSID WirelessAP-5G-10
Network     Channel 153       Image: Description weak of the second secon	sılİ	5.8G Wireless	MAC 78:D3:8D:D3:B4:62
Encryption WPAWPA2_TKIPAES  Management Connected Users 0 Client list	2	Network	Channel 153
Connected Users 0 Client list	150	Management	Encryption WPAWPA2_TKIPAES
		management	Connected Users 0 Client list





P32 LAN Status

#### 2.4G Wireless Setting:

In this part, will show the 2.4G Basic Setting, Virtual AP, Access control and Advanced Setting:

1HT.	Advanced Set	tings
6	Return home	2.4G Basic Settings 2.4G Virtual AP 2.4G Access Control 2.4G Andvanced Settings
٢	Setup Wizard	Wireless Basic Settings
<u>-</u>	Device Status	Wireless Status ON 2G wireless analyzer
zıtl	2.4G Wireless	SSID WirelessAP-2G-00
sıl	5.8G Wireless	Broadcast SSID O Disable  Enable
2	Network	WMM O Disable  Enable Channel
ð	Management	Band Width 20MHz 🗸
		Channel * 2.442 GHz (Channel 7)
		Authentication
		Encryption WPA/WPA2PSK_TKIPAES
		Key 66666666
		Apply

P33 Basic Setting in 2.4G Wireless

2G Wireless Analyzer: Mainly to analyze the AP's singal strength in some channel, to make user more easy to choose

the right channel

and avoid the wifi interface.



P34 Wireless Analyzer

#### Virtural AP:

There are 3 virtural AP in 2.4G wireless, if need virtural SSID, then users can configure it showed in following picture:

H Advanced	Settings
🔗 Return home	2.4G Basic Settings 2.4G Virtual AP 2.4G Access Control 2.4G Andvanced Settings
😧 Setup Wizar	d 2.4G Virtual AP
🔤 Device Statu	S Virtual VAP1 Virtual VAP2 Virtual VAP3
2.4G Wireles	S Wireless Status OFF
5.8G Wireles	SSID WirelessAP-2G-01
Network	Broadcast SSID O Disable   Enable
💾 Managemen	t WMM O Disable   Enable
	Encryption none 🗸
	Ambi
	Арру

P35 Virtual AP

2.4G Access Control: Mainly show MAC allow or deny:

[ <del> </del> ]	Advanced Set	tings	
ß	Return home	2.4G Basic Settings 2.4G Virtual AP 2.4G Access Control 2.4G Andvand	ed Settings
٢	Setup Wizard	Wireless Access Control	
<u></u>	Device Status	Access Control MAC Acess All Allow Listed	Apply
zıll	2.4G Wireless	Deny Listed	
sit	5.8G Wireless		
2	Network		
ð	Management		

P36 MAC Access Control

#### 2.4G Advanced Settings:

In this page, will show the regional, RF Power, Max user access...

ttings
Channel(1-13)
256-2346)
256-2346)
0-255)us
100-1000)ms
Range 0-64 0 not limited)
-65dBm~-90dBm)
er isolation
11( R -6

P37 Advanced Setting

<sup>5.8</sup>G Wireless Setting: Almost same as 2.4G Wireless:

1H	Advanced Se	ttings	
ñ	Return home	5.8G Basic Settings 5.8G Virtual AP 5.8G Access Control 5.8G Advanced Settings	
٢	Setup Wizard	Wireless Basic Settings	
-16-1	Device Status	Wireless Status ON 5G wireless analyzer	
zıl	2.4G Wireless	SSID WirelessAP-5G-10	
sıl	5.8G Wireless	Broadcast SSID O Disable  Enable	
2	Network	WMM O Disable  Enable Channel	
Ð	Management	Band Width 80MHz 🗸	
		Channel * 5.765 GHz (Channel 153)	
		Encryption WPA/WPA2PSK_TKIPAES	
		Key 66666666	
		Apply	

P38 5.8G Wireless Setting

#### Network setting:

In this page, mainly to show the LAN setting and VLAN as follow:

H Advanced Se	ettings	
🔗 Return home	LAN Settings VLAN	
🙆 Setup Wizard	LAN Settings	
🔤 Device Status	Access Type DHCP	
all 2.4G Wireless		
5.8G Wireless		
Network		
💾 Management		
	Analy	
	Арріу	

#### P39 Network Setting

It Advanced Set	tings										
ሸ Return home	LAN Settings	VLAN									
😧 Setup Wizard	VLAN										
Device Status			VLAN-ID(2-4094)	40	2.	4G	V/AD2	40	5.	BG	1/402
– 1 24G Wireless		ſ									
200 2.10 000000		Ī									
5.8G Wireless											
Network											
Network											
💾 Management											

#### Management:

In this part, show the system time, Logs, upgrade firmware, system, user info.

And we show System time, how to upgrade firmware and system page to users:

H Advanced Settings				
<u>۾</u> ا	Return home	System Time Logs Upgrade Firmware System User		
و ن	Setup Wizard	System Time		
<u>-</u>	Device Status	System Time 2015-10-30 11:16:34 Sync with host		
zıl 2	2.4G Wireless	Choose Time Zone Beijing,Chongqing,Urumqi,Re-Hong Kong,Taiwan;		
sil S	5.8G Wireless	NTP Server time.windows.com		
	Network	Equipment timing Auto restart 23:00		
	Management			
		Apply		

P41 System Time

It Advanced Settings				
ឥ	Return home	System Time Logs Upgrade Firmware System User		
۲	Setup Wizard	Upgrade Firmware 2nd		
E	Device Status	Software Version 31 Juild20151210202321 3rd 4th		
ad	2.4G Wireless	Choose File Upgrade Upgrade		
sil	5.8G Wireless			
	Network	Note odd not power off the device during the upload because it may crash the system 5th		
٢	Management 1			

P42 Firmware Upgrade

H Advanced Settings			
ß	Return home	System Time Logs Upgrade Firmware System User	
٢	Setup Wizard	Save/Reload Settings	
<u></u>	Device Status	Backup Backup	
zıl	2.4G Wireless	Restore Browse Restore	
sil	5.8G Wireless	Deset Default Reset Default	
2	Network	Reboot Reboot	
IJ	Managemen		

F45 System into	P43	System	info
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## 4<sup>th</sup> Share Internet and Obtain IP address automatically

Set computer's TPC/IP as Obtain an IP address automatically, Obtain DNS server address automatically as

#### following picture showed.

the computer will obtain the IP address from router or base station to get Internet.

上本地连接 Status	上本地连接 Properties ? 🔀	Internet Protocol (TCP/IP) Properties 🛛 🔹 🛛
General Support	General Advanced	General Alternate Configuration
Connection	Connect using:	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for
Duration:	Qualcomm Atheros AH8151 PLI-E Gig Configure	the appropriate IP settings.
Speed:	This connection uses the following items:	Obtain an IP address automatically
here and the second	Client for Microsoft Networks	O Use the following IP address:
	File and Printer Sharing for Microsoft Networks	IP address:
	There is a second and the second seco	Subnet mask:
Activity		Default gateway:
Ser	Install Uninstall Properties	
	Description	Obtain DNS server address automatically
Packets:	Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication	O Use the following DNS server addresses:
i donoro.	across diverse interconnected networks.	Preferred DNS server:
	Show icon in notification area when connected	Alternate DNS server:
	Notify me when this connection has limited or no connectivity	
Properties Disat		Advanced
	OK Cancel	

#### Trouble Shooting:

F 1 The Failure phenomenon and solution

Failure phenomenon	Solution
SYS Indicator off	Pls make sure the PoE module connection is right. POE Port

	connect with AP, LAN port connect with computer
Can't land to Outdoor Access Point through Web page	Pls check the IP address of computer and Outdoor Access Point to see whether they are in same networking segment, The method is click "start"-"Run" input"cmd", ping 192.168.188.253 to test the Outdoor Access Point connectivity. Reset Outdoor Access Point and load it again; Pls make sure the IP address 192.168.188.253 is not occupied by other device in Outdoor Access Point's networking; Check computer and cable problem, recommend to use 10/100M UTP unshielded cable; Clean up Arp binding from "Start"-"Run" input"cmd" arp –d Clean the IE Brower's temporary files and Cache file.
Outdoor Access Point can't connect with AP (the status display unconnected)	Try to scan the avaliable wireless networking again; Make sure the Outdoor Access Point's wireless standard (11b/g/n, 2.4G) is correct; The Security and passwords are matched between Outdoor Access Point and AP; The signal strength of AP is too weak to connect, should be more than -75dBm;
Can't scan the Outdoor Access Point	Scan it several times more; Make sure there are 5G signal existed. Reset the Outdoor Access Point, scan it again after Outdoor Access Point restart;
The connection of Outdoor Access Point and AP is success, but the computer can't share internet	Pls Check the computer's IP address and DNS setting. If it is dynamin, set the network card as automatically obtain. If it is static IP, pls contact with ISP for correct IP address and DNS address.
How to Reset Outdoor Access Point	Press the "Reset" button more than 15 seconds after power on. The Outdoor Access Point will restore factory default after the Outdoor Access Point restart.

#### FCC Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

Note 2: 1. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2. The minimum separation generally be used is at least 20 cm.