

User Manual

X10DR® PLUS





Low Radiation Levels

This product is designed to radiate low levels of radio energy in accordance with global government approved regulatory standards. It features Adaptive Power Output. APO automatically adjusts the RF power output in accordance with signal required. This feature limits and reduces extraneous radiated radio energy. This also helps minimize battery consumption and extends battery shift life. Compared to a regular hand held portable radio an X10DR device transmits 95% less RF energy from its antenna.

Note: the distance for Head SAR is 25 mm (1") and Body SAR is 0 mm.



Expected Coverage

The quoted expected typical coverage distances in this manual and other marketing material are for X10DR vehicle deployments, correctly installed, using our specified multi-polarity antennas with our supplied low-loss cable feeds. It assumes operation occurs in normal non-inclement weather, line of sight, in everyday city/urban/rural outside environments, where obstacles to the radio signals are minimal and the spectrum is devoid of high levels of RF interference from other electronic devices operational in the area. Finally, the X10DR handset is worn high on the body with antenna protruding above the shoulder area or held so that it's antenna is unobstructed and at a similar height.

1 meter = ~39 inches / 25mm = ~1 inch

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Nomenclature

SM = Secure Microphone Handset

MD = Mobile Gateway Charger

MC = Mobile Charger Only

EX2 = Elite Plus Model

PU2 = Pro Plus Model

Product Name **X10DR** _ _ _ _

Secure Wireless Microphone

Elite Plus



Pro Plus



Off/On/
Search

Status

- Default - Transmitting on radio
- ⊗ Flashing - Not connected
- Talkaround - transmitting locally
- Handsfree mode active
- Relay mode with GW connected
- ⊗ Flashing - Not paired (Relay mode active)
- Remote Relay mode handset
- Remote PTT active (or programming mode)
- Alternating - Find Me active

Mobile Charger Gateway



Status

- Off - DC power connected
- Connected
- Find Me active
- ⊗ Flashing - not connected
- Programming Mode

Function Button

- Manual Off/On
- Master Reset
- Find Me
- Touchless Pairing

XIVG Internal Gateway



XMVC

Mobile Charger

- Power

XRTG Plus Rooftop Gateway



XWPB Wireless PTT



- Press to Talk
- Short press Wake up
- Triple press OFF

HANDSET

Off/On: Long press (~2 seconds) to turn on/off. The handset will sound various intuitive tones.

Search: Short press to connect/reconnect to another paired gateway or a handset (relay mode).

Status light: Glows solid when operational. Flashes when "out of range" or gateway is off.

Volume up: Short press adjusts speaker louder.

Long Press to activate /deactivate Relay Mode. *Elite Plus models*

Volume down: Short press adjusts speaker softer - minimum setting is programmable to be off.

Microphone: Talk at normal strength about 1- 3cm (~1") from mic.

PTT: *Default Radio* Press to talk*# - May also be configured for **Talkaround PTT**.

Emergency: A confirmation beep sounds when pressed*# and then triggers host radio's emergency function. Press button as per mobile radio's emergency operating instructions or as advised by your supplier.

Control: Usually configured as **Talkaround PTT***# button. Can also be configured for Main Radio PTT, 2nd radio PTT or Talkaround Select (toggles Side PTT button assignment from radio to talkaround or PA talk). Confirmation tones will sound when pressed*. **Handsfree:** Double press the **assigned** Talkaround button to enable. A reminder beep will sound every 30 seconds. Single press to disable.

(Elite Plus models only).

DC charging: Handset beeps to notify correct seating when handset first placed in gateway, desktop or wireless charger. The handset's status LED may blink every 10 secs to indicate "charging" status. Solid blue means complete. Handset sounds 3 beeps every 5 minutes when charging is required.

Speaker: Delivers received speaker audio - Handset normally mutes when inserted into gateway, mobile or desktop charger.*

Headset connector: Use with X10DR headsets/earpieces and accessories** fitted with Hirose HR10 Plus connectors. External battery connects here.

#- When out of range the unit will sound a low frequency tone alert when the button is pressed.

GATEWAY

Function Button: Used to manually override auto Off/On. Fast double press for Find Me™ - Short press to reset. Fast triple press to enable Touchless "over the air" pairing.

Status light: Glows dim Red when OFF and DC is connected. Glows solid Blue when operational. Flashes when handsets are "out of range" or off. Flashes Blue/Red when Find Me is activated. (refer Status color chart left)

Antenna Connector: Connect long-range external or short range internal.

3.5 Audio Out: Provides either line level 180mV RMS. When X10W option is fitted provides up to 10W RMS @ 8 ohms and up/down buttons on the base adjust volume. Intended for in-vehicle monitor or use as a PA system. The handset Control button is usually used to make public address broadcasts.

WIRELESS PTT BUTTON

Emulates pressing the X10DR handset side PTT button.

Short press to power on or wake from deep sleep. Triple press to power off when not in use .

Devices deep sleeps when not used to preserve battery life. (Approx 2-3 months)

Handset will sound 2 short beeps every 5 mins when battery requires replacement. (CR2032)

*See Programming Parameters for configurations. Some tones can be enabled/disabled by programming or user selection. **Buy separately as needed.

Note: Product contains Neodymium, rare earth magnets, Keep away from credit cards or like items with magnetic strips that can be damaged by strong magnetic fields.

Thank you for choosing the revolutionary X10DR (“**ex-ten-der**”) Secure Wireless Microphone. This remarkably compact, lightweight personal handset accessory extends the power of the mobile radio to the palm of your hand, whether in or out of the vehicle. X10DR re-defines mobile network design by increasing user functionality and mobility whilst dramatically improving the effectiveness of your infrastructure investment. This visionary solution provides users out of vehicle communications with the power and performance of their mobile radio.

X10DR cuts the cord and puts the microphone and radio system access into the palm of your hand when away from the vehicle, delivering true mobility without system compromise. Users can feel totally confident their private communications are kept secure with AES128 encryption functionality. X10DR uniquely incorporates HLC™ “Hard Line Coding” connection protocol that virtually eliminates any possibility of outside intrusion between the X10DR and your vehicle’s mobile. When the mission is critical, X10DR delivers. Touchless pairing for use with XRTG and XIVG gateways are also available.

X10DR unleashes the power of your mobile radio allowing wireless communication up to 500 meters or more* with a fixed located or a vehicle mounted radio. Our EVR2™ enhanced voice resilience audio ensures users can communicate with clean clear audio, with the power and range of their mobile radio, whilst not being tied to the vehicle, allowing the user to be truly mobile in every operational environment. This ability to now communicate whilst outside your vehicle significantly enhances a safer and more secure work environment for everyone who carries an X10DR Secure Wireless Microphone.

How it works



SECURE WIRELESS COMMUNICATION
via your vehicle’s mobile radio



....up to 500 meters.

Note: Your X10DR will perform best when worn with the antenna protruding above your shoulder. Different types of clips are available.

XLMC Long mount clip (default)

Replacement part No: XLMC-RK

This general purpose type features a strong large spring belt clip which allows the X10DR Secure Wireless Microphone to be securely clipped to all types of industrial work vests, jackets, leather clothing, thick epaulettes and winter clothing etc.

XVMC Velcro® mount

Replacement part No: XVMC-RK

Features a Velcro "hook" disc on the back of the microphone. A 5x5cm (2") supplied Velcro "loop" patch should be ideally sewn to the users work attire/vest in the shoulder area to allow the antenna to protrude above.

XNMC Non-metal mount clip

Replacement part No: XNMC-RK

Designed for electrical utilities working amongst high tension power lines. Except for minimal metal components, it features all polymer parts to prevent high voltage spark leakage.

Gateway Securing

Rare earth magnets securely hold the handset into the gateway mobile charging cradle when not being worn.

Color Coding

Replaceable Color PTT buttons are available for personal or group identification.



Wear on your shoulder for best performance



XLMC Back Cover



XVMC Back Cover



XNMC Back Cover

XCPB COLOR PTT BUTTONS

Images for color reference only - refer official Pantone® PMS color chart



Power On & Off

The X10DR will power off & on in sync with the host mobile radio or by a manual switch fitted by your installation mechanic. You can manually turn off the gateway mobile charger by pressing the front grey button for 2 seconds and the blue LED will extinguish. You can do the same on the handset by pressing the red side button. The handset will sound a de-escalating tone. To power on, do the same, releasing the button once the handset sounds an escalating tone. The LED on both units will flash momentarily and then go solid once they're connected. (if not, refer device pairing pg 29)

Volume Control

When you first activate the unit you should first adjust the handset volume to a comfortable listening level. You may adjust the volume by pressing the top blue button to increase or the bottom to decrease. There are 7 listening levels. The minimum level is normally* not zero so you can still quietly hear radio traffic without inadvertently turning off all audio. *A programmable option allows the minimum level to be set to "audio off".

Transmitting/Receiving

Use like any two way radio speaker microphone, i.e. press the large PTT button to talk and release to listen. Speak with a normal strong clear voice about 1-2cm (<1") from the microphone port. Do not yell as this causes loss of clarity.

Talkaround

Your X10DR can be configured so that multiple X10DR devices can be connected to the one mobile radio. Press the Control (Talkaround) button to talk to other users X10DR users without the audio being transmitted over the main radio channel whilst continuing to be able to monitor all communications over the main radio system. The LED glows green with talkaround PTT is pressed.

Control - Talkaround Select - Toggle PTT Assignment (Elite Plus models)

You can program the Elite Plus handset so that the user can individually select what transmit function is assigned to the side PTT button to best suits their current work assignment. By programming the Toggle PTT-TA Button feature, the user can use the top Control button to toggle the assignment of the side PTT button from Radio PTT (LED glows blue) to Talkaround PTT (LED glows green), Radio 2 PTT or Public Address mode. In some situations users prefer for the Radio PTT and Talkaround PTT assigned buttons to be swapped permanently. The XFPK programming kit allows you to do this.

Control - Secondary PTT

In some applications your X10DR may be connected to two mobile radios, or a mobile radio and a satellite link or perhaps your vehicle's Public Address system using a XSFB or similar . In these situations the Control button can be used as a secondary PTT button to communicate over the secondary device rather than for usual talkaround use.

Handsfree (Elite Plus Model)

Elite Plus X10DRs can be configured so that multiple handsets can communicate locally, "off-net" in Handsfree full duplex talkaround. Use of a headset is recommended for optimum audio performance although in some cases it is not necessary. To enable Handsfree mode double press* the Control (talkaround) button, the handset LED will change to a purple colour and a unique tone will sound followed every 30 seconds with a reminder tone. To reset simply press Talkaround button again. See page 15 for more details.* See XFPK Programmer for alternative activation.

Out of Range Indication

If you walk out of range the status LED will flash to visually indicate you have lost connection with your vehicle. If you then push the PTT an alert tone will sound to let you know your call is not getting through as will pressing the Talkaround or Emergency button when "out of range". Depending on your location, you may find you need to walk back several meters closer to your vehicle to re-connect and the status light will then glow solid again. Additionally, an "out of range" status can be indicated via the gateway interface to allow other adjunct services to remotely monitor whether the user is within range of their vehicle or not.

Talk Permit tones

X10DR can provide talk permit tones* so users know when to start speaking so that words are not lost at the start of a transmission. The tones can be enabled individually, 3 short chirps when you press the main PTT, 2 chirps for Secondary or Talkaround PTT. If you are out of range of your vehicle, the user will hear the X10DR's Out of Range tone if the buttons are pressed.

Search and Re-connect

In systems using Command Relay and Auto Relay Mode (see page 19) to provide enhanced range extension, there are situations where a user may wish to manually force re-connection with vehicle gateway terminal or alternatively, to more quickly connect to a handset which has enabled Command Relay mode. Simply short press the handset red "search" off/on switch (a short beep will sound) to toggle between devices. It can also be used for user manual gateway selection in multi-gateway systems.

Emergency

The emergency button can be used to trigger and reset the emergency function on a suitably equipped mobile radio. It can be programmed so that the time you hold the button is the time your mobile radio registers the emergency command. So if your radio requires you to hold the front panel emergency button for 2 secs, then you should hold the Wireless Microphone emergency button for 2 seconds. A short beep* will sound when the emergency (orange) button is pressed.

Advanced Emergency Operation

X10DR models provide additional emergency signalling capability including sending alert tones locally to other units in multi-unit installations as well as over the network with or without optional Live Mic. Live Mic sends a user's Mic audio for a pre-programmed duration with higher audio gain so others monitoring can ascertain the nature of the emergency. This is followed by a receive wait time before repeating the cycle. Additionally, an external input wired to the Gateway emergency pin will cause it to send an alarm tone to the users. Emergency can be reset by pressing the emergency button for two seconds.

Mandown Monitor Mode

When fitted and activated, the Mandown function turns on automatically whenever you remove the handset from its charger. If there is no user movement or transmit activity for 2 minutes, quickening alert tones will sound for 30 seconds. If there is still no user activity, the radio's emergency input will be triggered. To temporarily disable Mandown operation, either power up the handset or remove it from its charger while pressing the top grey Control button until a 4 beep "pause" confirmation sounds. A gentle reminder tick will sound every 2 minutes until re-enabled. To re-enable Mandown, either power off/on the handset or place the handset into a charger and then remove. Mandown is disabled when the handset is placed into any charger/gateway.

XWPB Wireless PTT Button

A perfect addition for those using headsets or who need to use both hands while transmitting over the host radio. The ring finger wireless PTT button emulates pressing the handset's side PTT button. Short press to wake up the button from deep sleep or fast triple press to manually turn it off at the end of a shift to extend battery life. Depending on duty cycle, it will typically provide ~ 2-3 months operation from its replaceable low cost CR2032 battery. Every 5 mins, two beeps will sound from handset when replacement is needed. See page 30 for pairing details.

Find Me™

X10DR's Find Me feature allows a lost unit or its user to be audibly located by sounding a loud continuous alert tone in the handset. To activate double press the gateway function button. A loud alert tone will start to sound from the handset speaker*. It can be deactivated by the user momentarily pressing any button on the handset or at the vehicle by momentarily pressing the gateway's function button. Note if the handset is out of range it will immediately sound the alert tone once it reconnects to the gateway. Find Me can be enabled/disabled by XFPK field programmer. *A standard volume tone will sound from headset speaker if one is connected and **not** from the Handset speaker.

Accessory Mic Boost

Users can choose to increase the internal or external accessory's microphone sensitivity to cater for user sensitivity requirements or variations in headset manufacturer's specifications. To activate the higher sensitivity, the X10DR's blue Volume Up button should be held down while powering up. The user will thereafter hear 2 short confirmation beeps at the end of each start up tone sequence. To revert to standard operation, the handset should be powered up with the Volume Down blue button pressed. (levels can be set with XFPK programmer)

Headset Operation (note headset warnings later in this manual)

X10DR provides the user with a IP65 rated waterproof Hirose HR10 audio port to allow use of a wide range of headsets, industrial hearing protection heavy duty headsets besides a range of lightweight noise cancelling headsets and other traditional two way radio audio accessories to be connected to aid in achieving your communications objective in a clear and effective manner. Plugging in a headset or an earpiece disables the internal loudspeaker under all conditions.

Charging Confirmation Tone

X10DR provides the user with a discreet tone whenever the X10DR handset is returned to the charging cradle or wireless charger. This alert ensures the user has a positive indication that the X10DR handset is charging and seated correctly in the cradle. The X10DR handset's LED will momentary blinks every 10 seconds while charging. The LED remains constant once fully charged.

In-Out Of Cradle Remote Sensing

The gateway cradle provides an externally accessible indication of when the handset is in the gateway cradle or not. A XSJB or similar is usually used with this feature.

Radio Off Alert

Should the attached host mobile radio or gateway be turned off for any reason, the user will be alerted whenever the handset is removed from the gateway cradle, with an "out of range" tone. This automatic alerting ensures users know immediately their mobile radio has been deactivated.

Public Address /In-Car Monitor

The standard X10DR Pro Plus and Elite models provides a fixed level 180mVrms audio output that can be used with an external Public Address similar or command console position to allow a Secure Mic user's transmissions to be monitored when away from the vehicle or to allow public address. Audio connection is via a 3.5mm mono socket in the base of the gateway.

Motorcycle Use

The X10DR handset is especially suitable for motorcycle use. The 6 pin Hirose industrial connector allow easy connection to a helmet microphone and dual earpiece fit out. Making use of the handlebar PTT input, a bike can be configured so that, when the rider is on the bike and presses the handle bar PTT, their headset microphone audio is sent out over the radio. Off the bike but still wearing the helmet, the user can press the handset PTT to talk. Finally, if the user removes their helmet, they can unplug from the Hirose connector on the base of the unit and just use the handset like standard. Alternatively a wireless PTT button can be mounted on the bikes handle bar for convenient use.

Stealth Mode

For special applications the status LED on the front of the handset can be temporarily disabled along with all audible alert tones. This is achieved by holding down the VOLUME UP/DOWN (both) while powering up the handset. To turn the LED back on, simply power down and power back up. Alternatively, Stealth mode can be permanently enabled via programming the feature permanently on in the X10DR handset.

External battery

Simply plug in a USB cellphone style external battery power bank via the optional XEBC battery adaptor cable to the headset & external battery port. The handset LED will 'blink' every 10 seconds to indicate it is being re-charged. You can continue to use the handset as normal. Replace or remove exhausted power banks when re-charged as desired.

Covert Operation

The small size of the X10DR unit allow for its selective use in covert short range applications. The remote monitor PTT function means someone else can enable “listening” without the covert operative having to touch anything. Alternatively, they can be configured so you can also talk to them over the radio even when an operative is transmitting in local talkaround mode. Elite Plus models provides AES128 encryption to ensure totally secure voice communications. To enhance its security it automatically updates its encryption key continuously throughout the day, making it operationally far more tactically secure than the highest top end AES256 portable radios, who generally only have their encryption keys changed monthly or less and whose transmissions are often broadcast over wide area networks and thus more accessible from a hostile attack.

Earpiece operation

WPEH, WPTEP and WPEB 3.5mm earpieces are supported via the handset's 3.5mm earpiece jack.

Factory Options

XBP	Bulk volume packaging - un-paired (available for XEX2 also)
XMD	Mandown - user immobilized (Pro & Elite Plus handset only)
XNMC	Alternate Non-metal back cover (suits electrical utilities)
XVMC	Alternate Velcro® mount back cover & sew-on patch (suits elec. Utilities)
XCFC	Alternate color spk mic front cover & logo (MOQ 500)
XCBC	Alternate color spk mic back cover (MOQ 500)
XP2YWH	2 Years Extended warranty# - Pro Plus Handset - excludes battery
XE2YWH	2 Years Extended warranty# - Elite Plus Handset - excludes battery
XP3YWH	3 Years Extended warranty# - Pro Plus Handset - includes battery
XE3YWH	3 Years Extended warranty# - Elite Plus Handset - includes battery
XP2YWG	2 Years Extended warranty# - Pro Plus Gateway
XE2YWG	2 Years Extended warranty# - Elite Plus Gateway
XP3YWG	3 Years Extended warranty# - Pro Plus Gateway
XE3YWG	3 Years Extended warranty# - Elite Plus Gateway

Command Relay Mode Operation: *(see page 20 for more details)*

Any Elite Plus handset can activate Relay mode. First walk to where you require extended coverage (e.g. inside building lobby) while confirming a reliable vehicle gateway connection*, then activate relay mode by a long press (~2 secs) of handset's Volume Up button. When you hear three beeps, release button and handset LED will change to yellow with blue flash indicating connection to gateway (flashing yellow = gateway out of range). Your in-range, previously paired "Remote" handsets, will automatically connect with Command Relay handset once your connection to the vehicle's gateway is lost. Alternatively, you can immediately connect to the Command Relay Mode handset by a short press of the red colored Off/On "search" button - a short beep will sound and the 'Remote" handset LED will then change to yellow to indicate its new connection status. When desired re-press red search button to reconnect back to the "in-range" vehicle's gateway. Note: LED will glow blue when transmitting on host mobile, or green when talking locally, or purple if handsfree mode is activated. To deactivate Relay mode: Long press handset's Volume Up button until you hear one beep. Handset status LEDs will now change back to default color. *Note: If vehicle connection is lost, connected Relay and Remote handsets can still communicate with each other until back into vehicle range.

Automatic Relay Mode Operation:

Once activated by programmer, should an Elite Plus handset lose connection with vehicle's gateway, it will automatically search for another gateway "pre-paired" handset. The status LED of an Auto Relay enabled handset glows yellow with a periodic blue flash to let the user to know when they are connected to their gateway. When connect via another 'Auto relay" handset, the now 'Remote handset's" status LED will glow solid yellow. All operation is automatic and users operate their handsets as normal.

If desired, you can deactivate Automatic mode by long pressing the volume up button until you hear one beep. Re-activation occurs by either long pressing the volume up button again, or by powering off and on the handset. Should two or three pre-paired handsets lose connection with the vehicle gateway, then they will automatically re-configure themselves into a private off-network, AES secure, exclusive, talkgroup, so those users can communicate freely amongst themselves until back in range of the host vehicle. When back at the vehicle users should short press their off/on/search button is the event their status LED doesn't revert to yellow with a periodic blue flash. i.e. reconnect direct to vehicle gateway.

Multiple Handset - Single Gateway Operation (Elite Plus models only)

The Elite Plus models can support two* handsets simultaneously accessing the mobile radio via one gateway. This unique capability allows for more seamless connectivity and means that only one external antenna is necessary to communicate with all handsets when away from the vehicle. Each handset can transmit and receive over the host mobile while also monitoring each others communications traffic. All users are free to communicate locally "off-net" in talkaround mode, when that makes operational sense. With Handsfree active, then handsets can communicate locally between each other in full duplex mode - totally handsfree whenever the operators choose. Note: Only one Handsfree handset can be active at any one time unless earpieces or headsets are used. This breakthrough capability effectively creates a totally license free, exclusive, AES secure, local talkaround virtual channel, where users can privately communicate amongst themselves while still being able to listen to all traffic on their vehicle's mobile radio and can respond with the press of the handset's PTT button.

Additionally, users of the **same gateway** can talk back to another user even when that user is currently transmitting already, which may be operationally significant when 2 users are active.

X10DR secure wireless gateways can be further teamed up to provide six or more user operation from a single mobile radio. A junction box interface passes both transmit and receive audio to each X10DR gateway ensuring each user hears both active parts of the communications sent over the host two way radio channel.

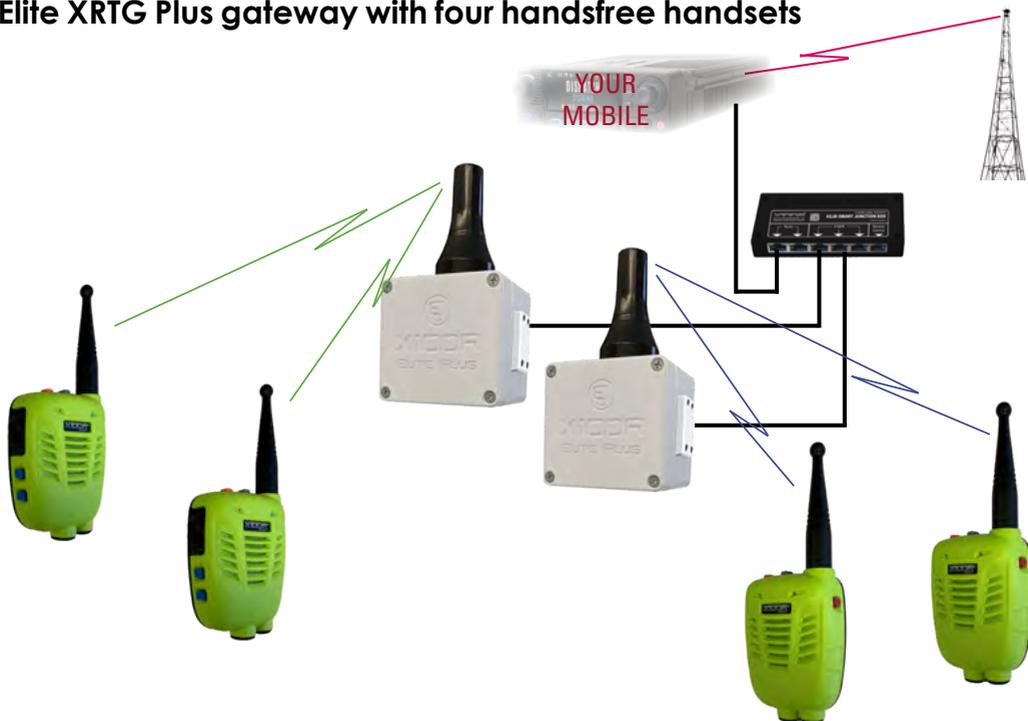
Pressing the handset's Talkaround button allows off-network local voice communications for up to 1000 meters (~3300 feet) **between users** while always ensuring reception of all mobile radio traffic by every user.

** we recommend a maximum of two handsets but a third handset, specifically for dedicated relay mode or when three handsets are used for standalone handset to handset communication outside of gateway range. We strongly suggest you first trial to make sure your operational requirements can be met **before** major 3HS1GW deployments.*



Talk locally on-site up to 1000 meters from each other

Elite XRTG Plus gateway with four handsfree handsets



Handsfree Mode in Talkaround (Elite Plus Model)

The X10DR has been specifically designed for outside high noise environments and incorporates advanced noise and echo cancelling technology to significantly limit background noise making it suitable for handsfree duplex conversations.

Our handsfree mode allows users to communicate securely and privately **locally** on-site without the need to press to talk. Elite's handsfree mode can be in some cases* be used without additional external earpieces as long as only one handset has handsfree mode active. Ideally all handsets use of a plug-in earpiece and locating the X10DR handset device on the user's shoulder, i.e. close to the users mouth for consistent performance. For best handsfree operation, we recommend use of noise cancelling headset with a boom microphone which can be located close to the users lips (but not too close otherwise a handsfree operator's breathing may be of annoyance to other listeners). The X10DR naturally provides programmable external microphone sensitivity so a wide selection of audio headset devices and operators can be supported.

***Only one handset in handsfree mode without earpiece or headset.**

Handsfree Configurations



Handsfree practical tips

When multiple gateways are connected to the one host mobile, handsfree by too many simultaneous multiple users may create confusion. In such cases we suggest the default operation be Press To Talk using Talkaround button, with only those users actually requiring hands-free being enabled. We suggest field trials to find the optimum audio settings and positioning of microphones for both clarity and operational effectiveness for your specific requirements.

Wireless Pacific Headsets



WPHFH-X10



XMCH-C



XMCH-O



WPATH-X10



**XWPB
Wireless
PTT Button**

XTBM Talkback Microphone



The X10DR Talkback microphone has been designed specifically to allow a user remaining in the vehicle to maintain full communications with X10DR handset users out of the vehicle while maintaining the ability to instantly communicate with others over the host radio network. To address changing priorities, the top grey Control button acts as a assignment toggle switch for the side PTT button. Press it once and the side PTT button becomes the Radio Transmit button and the status LED changes to blue to let the user know they are communicating out over the sky to the radio network. Press it again and the side PTT button once more becomes the Talkaround PTT button with the LED changing back to green to let the user know they are now talking locally on the ground (default position).

Alternatively, the side PTT button can be permanently assigned to local talkaround PTT with Radio PTT function assigned to the top grey button or vice versa to mimic a wireless X10DR default configuration. In either position, all X10DR wireless and wired handsets hear both sides of every conversation. The true all informed, group communication network where everyone remains connected.



Range Extension Elite Plus Models Only

Enhancing In-To-Building Coverage

To significantly enhance in-to-building coverage, Elite Plus handsets are all capable of relay mode. This exclusive X10DR Elite Plus capability means that one or two user handsets, when walking out of range from the vehicle's gateway, can still communicate via a still in-range 'relay' handset. There are two available operational relay modes:

Command Relay mode*:

The Command Relay feature is activated by default in all Elite Plus handsets but requires user to manually enable. Operation is enabled by long pressing the Volume Up button until unique confirmation tones sound and the handset's LED changes to yellow.

Automatic Dynamic Relay mode*:

Automatic mode once activated by the field programmer is then automatically in operation unless manually disabled. Handsets on power up are in Auto relay mode and their LED normally glows blue with a yellow periodic flash. Handsets must be also paired with each other to communicate in this mode.(see X10DR Plus user manual for pairing instructions)

*Besides be paired to the vehicle's gateway device each handset must be also paired with each other to communicate in this mode.(see X10DR Plus user manual Page 31 for pairing instructions)

System Note: Elite Plus 3rd Handset use

For best overall performance, we generally recommend a maximum of two operational handsets per gateway device. However use of a third handset is possible but may cause the Out Of Vehicle Communication System to be randomly subject to a higher level of inter/intra-system interference due to inherent limited spectrum utilization issues and system usage from time to time. The degree of what might appear random interference is subject to a variety of factors including the number of gateways operational in a single coverage area and general 2.4GHz spectrum utilization from other sources in general. A third handset operating in relay mode connecting to an out of gateway range handset is typically less subject to these RF environmental operational impacts.

We strongly suggest that should you plan to use a third handset with a vehicle's gateway that you first trial to make sure your operational requirements can be met before implementing major 3HS1GW deployments.

Command Relay Mode Operation

Manual - on demand deployment

By default, all Elite Plus handsets can activate Command Relay mode. To make use of Command Relay mode, one team member walks towards where extended coverage is required (e.g. inside a building's lobby). After confirming a reliable vehicle gateway connection exists, Command Relay mode is activated by a long press of their handset's Volume Up button. Upon hearing three beeps, the user releases the button and will notice their handset status LED has changed to yellow with blue flash, indicating that Command Relay mode is now active and they are connected to the mobile vehicle's gateway. As their partner/s enter deeper into the building and lose connection to the gateway, their handsets will automatically connect to the "Command Relay" handset. Alternatively, they can immediately connect to the Command Relay handset by a short press of their handset's red "search" button - their handset becomes a "Remote" and their handset LED will then change to solid yellow to indicate its new connection status.

All conversations are now relayed backwards and forwards to the gateway via the Command Relay handset. All talkaround¹, handsfree¹, emergency capabilities remain fully operational and naturally all users can hear each other. When back in-range, a remote user can re-press their red search button to reconnect back to their vehicle's gateway. Handset status LEDs will glow blue when transmitting over the host mobile radio, or green when talking locally, or purple if handsfree mode is activated. To deactivate Relay mode at any time simply long press that handset's Volume Up button until you hear one beep. All handset status LEDs will now change back to their default color.

Unattended Command Relay handset

Naturally, there is no need for the Command Relay handset to be attended, it can simply be placed wherever is the best "relay point" to ensure communication can be achieved in the desired remote location. For example, the entrance to a shopping mall, entrance to a local stadium, down a long corridor leading from a hospital emergency entrance into a distant triage area. Typically the point just before reliable line of sight communication is lost with the vehicle.

Handset	 Relay mode with GW connected
Status	 Flashing - Relay mode no GW
LED	 Remote handset mode

¹remote handsets only can use talkaround and handsfree between the command relay handset and each other.

Remote from the vehicle - Stay connected

Sometimes all responders may have no choice but to travel well out of range of the vehicle. With Command Relay mode they can remain in contact with each other via Talkaround or Handsfree full duplex when active. When back in range of the vehicle they automatically will reconnect and be able to again communicate over the host mobile radio network. When out of range of the vehicle and disconnected from the gateway the Command Relay handset LED will flash yellow. Users can typically communicate up to 250 meters line of sight from each other in such situations.

Command Relay Mode

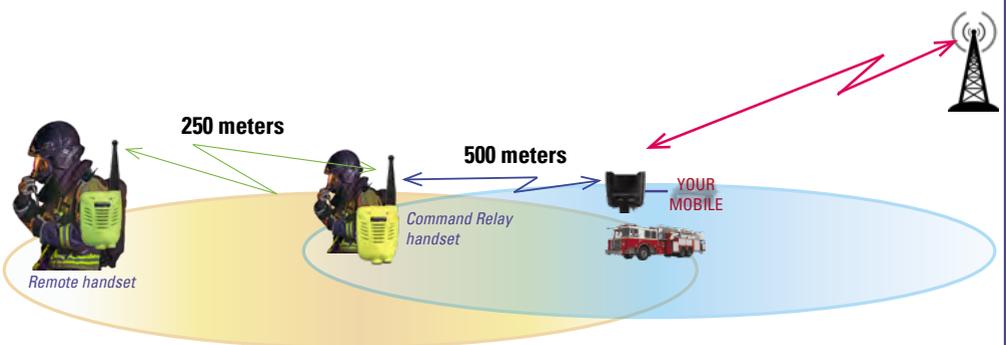
User manually activates Command Relay Mode (Long press Volume Up button) at edge of good coverage, so one or two

pre-paired handsets can automatically connect via the Relay handset when coverage to the gateway is lost, or users can short press Search (Red Off/On button) for immediate connection. Short press Search (default: Red Off/On button) again to make it reconnect to its gateway.



Command Relay Mode handset connected to a 2nd handsets

User manually sets up a 'command post' on the edge of good vehicle coverage thereby allowing the two 'remote' connected handsets to roam in-to-buildings.



Refer page 2 for expected coverage notes

Automatic Relay Mode Operation

Automatic Dynamic deployment

Automatic Relay mode is major breakthrough in long distance wireless microphone technology. It allows communication to occur via a nearby team member's handset when communication coverage is lost with the vehicle X10DR's gateway. This ensures connectivity to the host mobile radio, satellite terminal, control console etc as users go about their business. Being totally dynamic, anyone of the gateway's handset will automatically assume Relay mode master should a handset lose connectivity all without any user intervention. It's the wireless microphone equivalent of wide area roaming. Users require little if an additional user training other than user awareness handset can now act as Relay point.

The status LED of an Auto Relay mode active handset glows yellow with a periodic blue flash to let the user to know when they are connected to their gateway. When the user presses the Radio PTT button the LED changes to blue, but when transmitting in Talkaround it glows green or purple when in Handsfree mode. Should the handset lose connection to the gateway its LED will flash yellow as it search for an alternative path via a nearby handset. Once connected it is now operating as a 'Remote handset' and its status LED will glow solid yellow. All operation is automatic and users operate their handsets as normal. A "slave" Remote handset can not connect act simultaneously as a "master" Relay handset. Automatic mode can be disabled by long pressing the volume up button until you hear one beep. Re-activation occurs by either long pressing the volume up button again.

Unattended Auto Relay handset

Like Command Relay mode, any Auto handset can be simply placed at the optimum desired relay point to enhance in-to-building coverage and the other handset/s will automatically link to it as the move in and out of the building.

Standalone Use

Auto relay mode allows two or three handset to operate completely independent from the vehicle. The handsets can communicate up to 250 meters from each other (up to 500m radius). Operating on license free, virtual exclusive channels these fully AES128 encrypted "portable" with dynamic constant key change, offer the ultimate in tactical voice protection at a price a fraction of traditional AES portable radios.

Automatic Relay Mode

Upon power up Auto Relay mode programmed handsets always look for an alternative radio path if the connection to its gateway is lost. Once connected via another handset they become a Remote handset and their Relay capability is temporarily disabled until connection to their current Auto Relay handset is lost. A short press of the Search (Red Off/On button) will make it search for gateway or another in-range Relay handset to connect to.



Elite Plus Handset with Auto Relay active



Auto Relay handset becomes Remote handset

Relay Mode Handsets connected to Gateway

Handset A and B move around and maintain connection with Gateway. All handsets can Radio PTT, Talkaround and use Handsfree, if enabled.



Refer page 2 for expected coverage notes

Handset Status LED

- Relay mode with GW connected
- ✕ Flashing - Relay mode no GW
- Remote handset mode



Relay Mode: Handset connected to one Handset

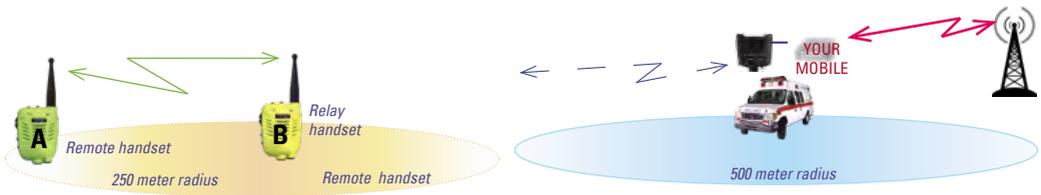
If Handset B moves and loses connection with Gateway, it searches for Relay Handsets A. It reconnects via the still in-range Handset. All handsets can Radio PTT, Talkaround and use Handsfree, if enabled, amongst themselves.



Relay Mode: when Gateway connection is lost.

If Handsets A & B lose connection with gateway all handsets search for alternative connection.

If Handset A finds B they connect and all can now Talkaround or Handsfree, if enabled, amongst themselves. If A loses connection with B, A will first look for Gateway, Handset B is always looking for reconnect to gateway. If any handset presses Radio PTT or Emergency then Out Of Range tone sounds.



Refer page 2 for expected coverage notes

Audio Adjustments - Very Important!

Typically the X10DR's default audio levels settings are suitable for a variety of today's professional mobile radios, when used with the Wireless Pacific model specific XCA Plus X10DR cable adaptors. Before installing your X10DR system you may need to adjust the transmit and receive audio levels using the **XGALA Gateway Audio Level Adjustment software tool**, running on a Windows 10 PC. Use either the XFPK gateway programming cable or you can use a USB A-USB Micro cable.

Run the XGALA application and connect to the base of the gateway. (download: <https://www.x10dr.com/supports/>)

Transmit Adjustment:

To verify the transmit microphone level, first talk on the mobile radio's curly cord microphone while monitoring the communication with another radio etc. Speak in a normal voice about 2-3 cm (1") from the microphone, now do the same with the X10DR handset; the audio levels should be about the same. If not, adjust using the software tool so that levels and audio quality are about the same then save into the gateway.

Receive Adjustment:

Using another radio, talk into its microphone while listening to the audio received through the X10DR handset speaker. It should be loud and clear with the X10DR volume turned up near maximum. If not, use the software tool to adjust to the desired level. On some model radios, the radio's volume control effects the Rx audio that is passed to the X10DR, for these situations first set the host mobile to a normal listening level before then programming the receive audio level for desired loudness. In such cases, users should note if you adjust the host mobile radio's audio up or down the X10DR speaker audio will be effected likewise.





Enabling Programming

REFER TO PROGRAMMING PARAMETER GUIDE FOR FULL DETAILS (see support page x10dr.com)

Standard and XIVG Gateway Programming

Plug the programming cable into the USB-micro port in while holding the grey function button. The status LED will glow Red to indicate programming mode.

XRTG Gateway Programming

Remove the XRTG front cover and plug the programming cable into the USB-micro port in while holding the internal function button on the small internal PCBA which includes the status LED.(glows Red in programming mode)

Handset Programming

Plug the programming cable into the Hirose port. Now power on the handset while holding the side PTT button. The status LED will glow Red to indicate programming mode.

Pairing Information

Each X10DR handset is paired to a specific gateway in the factory. This ensures that all communications between the two units are secure. In the event of a handset being lost, it can be permanently disconnected from the gateway mobile charger by master resetting the gateway. It is best to master reset all X10DR devices before pairing with any new device. This prevents unwanted time delays when reconnecting or other inconsistencies.

Erase Gateway: *(XRTG Plus - see Pg 32)*

To reset a gateway first manually turn off gateway. Next press grey Function button again, continue to hold for about 10 second until the LED flickers quickly then only flashes very slowly. The gateway is now reset and the new handsets can now be paired.

Erase Handset:

To reset a handset: With the handset powered OFF, press the PTT and volume up button while powering ON by pressing the right side button. Master resetting drops all previous pairing. Turn handset Off and the On and the handset will be in automatic pairing mode and pairing tones will sound.

Erase Wireless PTT Button:

First triple Press finger PTT button to power off. Then long press PTT button for 10 seconds to erase pairing. After the pairing data is erased, the PTT button will enters into "pairing mode" looking for handset to pair with.



Turn Off gateway and then press and hold for 10 seconds until fast flicker followed by very slow flash



Turn Off handset and then press and hold PTT, Volume Up and On button until triple press sounds.



Triple press to turn Off PTT button. Wait 1-2 seconds and then press and hold PTT for 10 seconds.

Standard Gateway Pairing

Handset & Standard Gateway Pairing *(XIVG - XRTG Plus - see Pg 32)*

With handset and gateway powered on, hold the handset pressing both its side Volume Up/Dn blue buttons until the blue LED flashes and the handset beeps (~5secs). Now place the handset back into the gateway cradle. After a few seconds the handset will sound a confirmation two tone and the blue LED on both units will glow solid to indicate completion. Repeat procedure if you require other handsets to be paired to the one gateway. Up to five mics may be paired to the same gateway but only one can be operational with Pro Plus gateways and three with Elite Plus. *(Power Off and then power On the desired operational handsets after pairing complete)*

If multiple handsets are powered on and paired, should the currently operational mic be turned off or go out of range for longer than ~15-45 seconds then, the gateway will then try and automatically connect with the next stored powered paired handset.



Handset

Press volume up & down buttons together until tones start.
Now drop handset in cradle and wait for confirmation tones and led on both devices glows solid.



Gateway

Handset and PTT Button Pairing

Handset and Wireless PTT Button Pairing

The XWPB wireless PTT button can be paired with any Elite Plus or Pro Plus handset. To pair first put handset into pairing mode by simultaneously press both volume controls AND the Orange "Emergency" button until pairing tones sound. Next triple Press finger PTT button to power off and then press PTT button for 10 seconds to erase and enter into pairing mode. Hold near handset. Handset will shortly sound pairing complete tones. Note: a previously unpaired XWPB will be in pairing mode as soon as battery is inserted.



Handset

Press blue volume up & down & orange emergency buttons together until tones start

First fast triple press to turn PTT button off. Then re-press and hold for 10 seconds and release. Wait for confirmation tones from handset.



PTT Button



Relay Handset Pairing

Relay Mode Handset Pairing (Elite Plus Only)

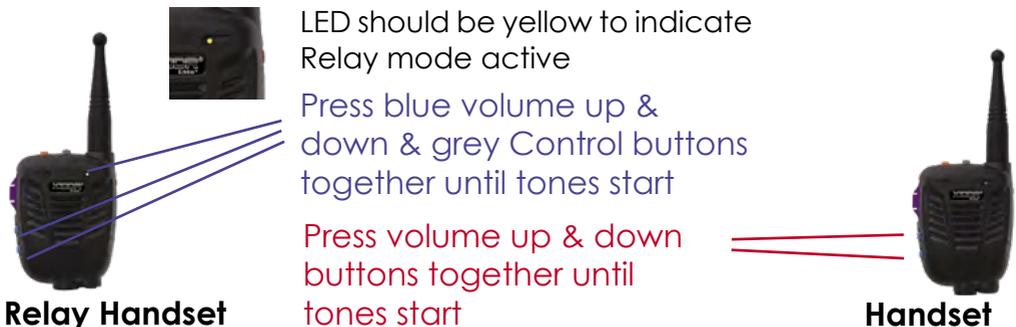
Each Elite Plus X10DR handset is capable of Relay mode either Command or Automatic depending on device programming. To be part of a handset Relay group, those handsets need to be paired with each other, after **FIRST BEING PAIRED WITH THEIR ASSIGNED GATEWAY**.

To add a handset to your list of possible remote handsets. First turn Relay mode On* (long press Volume up button- LED turns yellow) Place the Relay handset into Touchless pairing mode by simultaneously pressing both Volume up/down and the Control (Talkaround) button ~ 5 secs. Tones will sound. Now put the handset to be added into pairing mode by pressing both volume buttons until pairing tones sound. Place handsets close together Pairing complete confirmation tones will sound after a few seconds. Turn off the added handset and repeat process with additional handsets, as required. Then repeat procedure until all handsets have been paired with each other. Process complete..

*Handsets programmed for Automatic Relay mode are already active, so there is no need to long press the volume up button before pairing with other handsets)

IMPORTANT

We highly recommend that handsets **ONLY** have its existing gateway We highly recommend that handsets **ONLY** have its existing gateway and specifically required associated handsets paired. Adding additional unrelated handsets or gateways will increase connection times. If unsure, first erase all prior pairing in handset. Next first pair the related gateway BEFORE pairing with related handsets. For multi gateway vehicle deployments using XSJB/XFSB, for Relay Mode we suggest that each handset be paired with up to 4 (maximum) other handsets paired to those gateways, so as to maximize the opportunity for other handsets to RELAY communications with an "out of gateway range" associated handset.



Touchless Gateway Pairing set-up

Handset XIVG -XRTG Plus Gateway Touchless Pairing

All X10DR Elite Plus and Pro Plus Gateways allow Touchless pairing for greater convenience and flexibility of gateway installation.

It is recommended to first master reset the gateway by pressing the standard or XIVG gateway grey function button (until see 3 quick flashes on GW LED) or press the XRPB connected in-line with the XRTG gateway for ~10 seconds, or if applicable the assigned pairing button on the XCCP panel.

Next quick triple press the same button. The Standard and XIVG gateway's LED will flash for 1 second off/on. Now, take the handset and put it into pairing mode - simultaneously press the two volume buttons for 5 seconds until you hear pairing tones. Now hold handset nearby the gateway and wait until confirmation tones sound. On Elite Plus models, when desired, turn off the paired handset and pair another handset in the same manner.

XRPB - Rooftop gateway pairing/erase button:
Plugs in temporarily between XCA cable adaptor and the XIC interface cable connected to the rooftop gateway.



XRTG-EX2 Elite Plus Rooftop Gateway



Handset

Press volume up & down buttons together until tones start



XIVG Series Internal Gateway

Triple fast press button to ready gateway for touchless pairing.



Standard Plus Gateway

Automatic Gateway Pairing set-up

Alternate Handset - XRTG Plus Gateway Automatic Pairing

X10DR Elite Plus gateways, commencing 2nd half of 2021, will progressively incorporate a simplified alternate pairing procedure to allow easier pairing of a replacement handset. Earlier versions of X10DR Elite Plus gateways can be firmware upgraded (use V3.43 or later) to allow this functionality. This procedure does not require use of XRPB Pairing button unless you wish to erase* all previous pairing information in the gateway.

We recommend you first master reset the gateway(see below). Next power off the connected host radio. Now unplug the XIC-6.0 cable from the XCA radio adaptor. Wait 2 seconds and then plug the XIC cable back in. Automatic pairing will be enabled in the gateway for the next 30 seconds.

Next put Handset into pairing mode - simultaneously press the volume up/ down buttons for 5 seconds until you hear pairing tones. Note: unpaired or erased handsets will power up in pairing mode. Simply hold the desired handset near the gateway and wait until confirmation tones sound. When desired, turn off the paired handset and pair another handset in the same manner. When completed, power on the host mobile radio and power on all handsets. Wait until they connect and operate as desired.

How to erase XRTG-EX2

You can master reset/erase an XRTG gateway by disconnecting the XRTG from power by unplugging the XIC cable and temporarily inserting an XRPB in series with XIC and XCA interface cable/adaptor. Press XRPB button for ~10 seconds and release. All previous pairing will be erased.



Additional Information

To provide even greater range and in-to-building coverage, Wireless Pacific have developed a unique external mount version of the Elite Plus Gateway. The electronics inside the XRTG-EX2 are identical to the standard X10DRMD-EX2 Elite Plus gateway.

Operating in the 2.4GHz band means coax cable losses can be significant. In fact half the power can be lost on a standard XMPA antenna kit installation. By simply repackaging the existing Elite Plus Gateway electronics into an IP67 rated weatherproof housing and mounting the gateway externally, unobstructed, on a roof rack or similar, we are now able to achieve range in excess of 700 meters down a straight highway. Naturally, that also means greater “into building” penetration.

Control Station Use

The XRTG can be mounted up to 25 meters from the host radio/control station making it also ideal for warehouse installations or in those situations where the required building coverage might be better achieved by mounting the gateway in a central building high point overlooking the office work areas below.

Similar Installation

Connection to the XRTG Plus is usually via the connected 6m long shielded flat interface cable. To simplify installation, both ends of the gateway connect cable are terminated but should you need to shorten the cable or remove the shielded RJ45 plug to allow passing through a cabin wall etc, a replacement can be found at any computer network supply store. Should your application require, a number of vendors (Digikey etc) supply IP67 rated shielded bulkhead RJ45 connectors for providing a watertight entry for the cable into the passenger cabin.



The gateway connects to your mobile radio in your vehicle (or office control station). It passes all voice traffic to and from the secure wireless microphone.

General Information

To provide greater installation flexibility, Wireless Pacific have developed a highly compact internally mounted version of the X10DR Plus Gateways. The electronics inside the XIVG Plus gateway is identical to the standard X10DRMD-EX2 Elite Plus or X10DRMD-PU2 gateways.

Simple Installation

Connection to the XIVG Plus is usually via a supplied short 15cm shielded flat interface cable connected directly to the XCA radio interface adaptor.

Antenna Choice

For many applications, connecting the supplied handset XSMA2 ground independent antenna directly to the XIVG gateway will provide sufficient out of vehicle or around office communications. For maximum range we suggest use of an XMPA multipolarity antenna. Always pre-trial actual performance to make sure your users' operational needs are met.



The gateway connects to your mobile radio in your vehicle (or office control station). It passes all voice traffic to and from the secure wireless microphone.



X10DR performs best when worn with the antenna protruding up above your shoulder. This helps reduce the effects of body shielding and enhances overall coverage. Coverage is always dependent on the local terrain, obstacles and the overall communications environment. For longer distances, an external antenna should always be fitted to the vehicle and never substitute the coax cable supplied. For best performance we recommend you use our multi-polarity antennas. A choice of vehicle antennas are available to enhance in-to-building penetration or, to simply extend the overall communication zone around your vehicle. Units operating in the 2.4GHz unlicensed band may be subject to external interferences from others at times. The quoted expected coverage distances in this manual and other marketing material are for X10DR installations using our specified multi-polarity antennas with low loss cable feeds and assume operation is undertaken in normal line of sight everyday city/urban/rural outside environments where obstacles to the radio signals are minimal and the spectrum is devoid of high levels of RF interference from other devices operational in the area. Handsets worn on the shoulder or held with antennas unobstructed at similar height.

Speaker Mic Antenna

The XSMA2 antenna has been specially designed to perfectly meet the radiation requirements of the X10DR Secure Microphone. Do not use alternatives as they will void regulatory type approval and generally always reduce overall performance. Keep the antenna at least 25mm away from your head at all times

Vehicle Antennas

The standard gateway output has a reverse polarity SMA female antenna connector designed for connection of a variety of approved Wireless Pacific 2.4GHz external antennas.

The **XMPA and XMAK** multi-polarity antenna provides improved coverage in multipath - non line of sight - situations. It should be mounted onto an unobstructed area on or above the vehicle's roof line and should always be connected via the supplied low loss coax cable to the X10DR cradle connector. **MAKE SURE YOU FULLY TIGHTEN!**

The **XMMA** magnetic mount antenna is intended for use in temporary installations or for initial demonstration purposes or use with an office location where it may provide greater flexibility provides enhanced coverage when placed on an unobstructed area of a vehicle's roof and should be connected via its low loss coax cable to the RP-SMA-F output on the mobile gateway charger. **MAKE SURE YOU FULLY TIGHTEN!**

In user applications where maximum range coverage is not a key requirement, the standard secure mic's **XSMA2** antenna can be attached directly to the base of the gateway. It will typically provide a solid 50-100m coverage bubble around the vehicle or office installation.

Note: Only the XMPA, XMPA2, XMAK, XMMA and XSMA/2 have been FCC/IC/CE approved for connection and operation with X10DR. Use with any other antenna may void type approval.



Warning:

Keep your body at least 20cm (8") away from vehicle mounted external antenna. See page 49 for further important information.

Note: the distance for Head SAR is 25 mm and Body SAR is 0 mm.

Replacement Antennas

In the event of a damaged or lost antenna, only **original replacements** should be used so as to not **void the unit's FCC/IC/CE type approval** certification or performance. The Pro and Elite secure microphones use a 2.1dBi ground independent antenna for maximum multi-directional range.

Battery - Charging

The X10DR handset should be charged overnight before initial use. Thereafter it may be left in the charger unit between calls, or may be worn all day and placed back at the end of the work day. The unit is designed to provide about 15-24 hours operation between charges even on the busiest radio channels - even longer where earpieces or headsets are used. On quiet channels it may last up to 3-4 days. When the battery does start to go flat, 3 short beeps will sound once every 2 minutes. It will then typically power down after about 30 minutes. Subsequently, you should plan to re-charge the unit as soon as is practical once the chirps are heard. A fully discharged battery will typically recharge in around 3-4 hours, or less if only partially discharged. The battery will re-charge even if the gateway cradle unit has been turned off. The microphone's blue status light will indicate charging by a momentary blink every 10 seconds. When fully charged the handset LED will remain solid.



Recharging:

Simply place handset into charger pocket. X10DR will beep to show correct placement. Charging will commence. Alternatively, you can connect a USB (cellphone style) power bank via a XEBC external battery charging cable to the handsets headset port. The external battery can be left attached or removed once the handset is fully charged (Blue LED solid - momentarily blinks every 10 seconds when charging. NB: do not allow debris to fill the charger pocket as it may prevent the microphone from making contact with the charging pins. Keep all liquids well away from the charging cradle at all times.

End of Battery Life

When you notice the X10DR sounding a small chirp every five minutes, it indicates the battery is nearly flat and should be re-charged. The unit will self power down when voltage drops to the minimum level. When you notice this occurring far more often than usual, it may mean it is time for the battery to be replaced.

Like all re-chargeable products, periodic replacement of the internal battery is required. The handset features a high capacity Lithium Ion battery. To maximize the life of a Lithium battery its is better to keep it topped up by returning it to the charger often rather than waiting for it to first go flat - which was the opposite case with older nickel based batteries. Typically you can expect to get about 400 complete re-charge cycles before requiring replacement. Your dealer can arrange replacements.



X3MK- X3MK-B

3 way charger mount for XMVC chargers.

includes XDCC-RJ and 3 x XIC-0.15.

B Version includes DC battery back up for "after hours isolated vehicle battery support"



XDTC

Desktop Charger

Elite Plus & Pro Plus models



XMVC

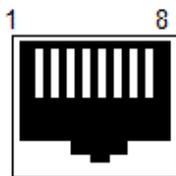
Mobile Charger



X6WC

6 Way Charger

Elite Plus & Pro Plus models



Front View

**Receptacle
Shielded RJ45**

8	○	Talkaround audio - Remote/Handle bar PTT	
7	○	Ext PTT to radio	
6	○	COR/ Audio unmute indicate from radio	
5	○	Mic Lo	
4	○	Ext Mic Hi Output/Radio On detect	
3	○	Radio Receive audio	
2	○	Emergency output to radio	
1	○	Power nominal +12VDC	
SH	○	DC Ground	shield/drain

See the X10DR Installation Instructions for more detail.

1. Power: Connected via a 3 amp in-line fuse preferably direct to a vehicle's 12V battery but can be any voltage from about 7-16VDC. Current consumption is typically 60mA/Max current 420mA@6V. (12V = <200mA)

2. Emergency I/O: Intended to connect to the host mobile radio's emergency input. It provides an active switched ground. With default programming, the time held low will be the exact time that the user presses the Emergency button. This output could also be used for other functions such as to trigger a remote voice logger or sound a horn, providing it is correctly "buffered". The I/O can also be externally grounded to sound an Emergency alert tone in Elite handsets so configured. Radios requiring switched high activation are addressed via radio specific XCA circuitry.

3. Gateway audio in: Receive audio from the host mobile radio that you wish to be sent to the handset. Ideally, it should be sourced pre-volume control but if not accessible, it can be post, as long as the host mobile radio's speaker audio has first been set for a comfortable listening level in the vehicle.

4. Gateway audio out: Audio from the handset that is to be transmitted over the host mobile radio's transmitter is factory set for ~80-100mV RMS.

NOTE: This line is also used to automatically **turn on/off the X10DR gateway** by detecting the host radio's "DC biased" Mic hi input. If providing your own interface when connecting to a device with an AC coupled Mic Hi input, the installer should supply a manual on/off switch or a jumper that connects a 100K resistor between RJ45 pin 4 and pin 1 (Batt+)

5. Mic audio grd: This should connect to microphone **audio** ground.

6. COR/audio unmute: Input is designed to monitor the receive status of the host mobile radio. Ideally, it is driven by an “audio unmute” switched ground command in the host mobile. i.e. when the radio's speaker unmutes to pass audio then the COR input should toggle in sync. Alternatively, it could be driven by the radio's unsquelch command that factors in reception of required correct CTCSS tones, etc. Where COR is not available the X10DR's voice audio detect capability will in almost every case allows satisfactory operation with minimal voice clipping.

7. Ext. PTT output: Switched ground output designed to drive the host mobile radio PTT.

8. Talkaround audio/status bus: passes fixed audio level between multiple X10DR gateways connected via XDIA/XJB/XSJB/XFSB (Junction Boxes). The line can also used for Remote PTT input*. It also provides an indication of talkaround button being pressed or whether the handset is in the cradle and/or whether the handset is turned on and within range of the gateway via an appropriate special function boxes.

9.Shield. DC / Digital ground / Vehicle chassis connection.

*** Remote PTT:** Activate by grounding. This provides an alternative remote PTT to transmit secure microphone audio via the host mobile radio. You may choose to connect to a motorbike handle bar PTT, a hidden palm or footswitch, a wireless PTT device, or even to an output from the host mobile equipped to provide remote radio monitoring of the secure microphones users audio. In such remote monitoring cases, use of the remote PTT input causes the sensitivity of the INTERNAL microphone to be increased (programmable), so a control room operator can more easily monitor the health or safety of the user. There is no increased audio gain when a headset is connected to the audio port at the base of the handset.



Up to 500 meters and more

Audio & General Accessories

Advanced Ear Mic with 2.5mm twist and lock ear receivers



XMCH-C
Closed face
motorcycle headset
Use with/ without XIPB
in line PTT



XMCH-O (V2)
Open face
motorcycle headset
Use with/ without
XIPB in line PTT



XIPB
In-line PTT suits
all X10DR audio
X10 and XMCH
accessories

WPHFH-X10
Industrial lightweight
noise cancelling
headset
Use with/without XIPB
in line PTT

WPATH-X10
Lightweight Acoustic
tube headset
Use with/without XIPB
in line PTT

WPULH-X10
Ultra light headset
Use with/ without
XIPB in line PTT

WPSHD-F
Industrial heavy duty noise cancelling
hearing protection headset
Use with/without XIPB in line PTT

WPFHC-X10
WPSHD-F Headset to
Hirose cable, Peltor
FLX2 compatible



WP3WS-X10
Lightweight cover
3 wire acoustic tube
audio accessory

WPWLP-X10
Large in-line PTT pad
with wireless ring PTT
for Nexus plug

WPWLP-X10D
Large In-Line PTT
-for Draeger or similar
Breathing Apparatus

*For reference only
Purchase elsewhere*

WPSHC-NEX
WPSHD Headset
to Nexus plug

WPNEX-X10
Peltor™ J11
interface cable



XTBM
Talk Back Remote
Speaker Microphone
- plugs in-line with
interface cable to
gateway

WPTEP
Acoustic tube ear
receiver with 3.5mm
connector

WPEH
Across ear large
receiver with 3.5mm
connector

XMS
Elite IP67 Speaker
10W 8 Ohm

XATB2
Advanced
Test Box

XIC-0.15
15cm interface
cable

XDIA
Dual Adaptor

XWPB
Wireless PTT Button Use
with Pro/Plus, Elite/Plus
handsets

XEB
external battery cable
90cm Hirose to USB-A
(use with powerbank).

XRPB
Rooftop gateway
pairing/erase button

XHRC
Hirose port
cover

XFPK
Field Programming kit

Audio / Handset Accessories:

WPTRQ-X10#	Advanced ear microphone (requires TL earpiece).
WPEH-TL	Large black "across ear" earpiece for iTRQ.
WPTEP-TL	Acoustic tube "quick disconnect" for iTRQ.
WPEB-TL	Black earbud "in ear style" earpiece for iTRQ.
WPBEH-TL	Black earhook - small earpiece for iTRQ.
WPLEH-TL	Extra loud across ear earpiece for iTRQ
WP3WS-X10#	3 wire covert style surveillance audio accessory.
XTBM	In Vehicle Talk Back Microphone Kit.
XMS	10W IP67 rated External Speaker 1.5m with 3.5mm plug
XWPB	X10DR Wireless PTT Button
XVCA	Velcro clip adaptor for XVMC.
XEBC	External battery charging cable 90cm Hirose to USB-A (use with powerbank).
XHRC	Hirose connector rubber sealing plug

Headsets and Adaptor cables

WPULH-X10#	Ultra light headset - earpiece style(no in-line PTT).
WPATH-X10#	Acoustic Tube lightweight headset (no in-line PTT).
WPHFH-X10#	Industrial lightweight headset (no in-line PTT).
WPSHD-F	Noise canceling heavy duty headset for X10DR. (requires WPFHC-X10).
WPFHC-X10#	X10DR interface cable for direct WPSHD-F use. (3M Peltor FLX2 compatible)
XMCH-C#	Closed face headset for Motorcycle helmet.
XMCH-O (V2)#	Open face headset for Motorcycle helmet.
XIPB	In-line PTT for WPFHC-X10 & XMCH M/C h/sets.
WPWLP-X10	Large in-line Nexus PTT adaptor. (use with Peltor 32 ohm J11 headsets or WPSHC-NEX)
WPWLP-X10D	Large in-line Nexus PTT adaptor for Draeger etc.
WPSHC-NEX	WPSHD headset to Nexus cable - for WPWLP-X10.
WPNEX-X10#	Nexus-Hirose cable for Peltor J11 32 ohm headset.

3.5mm Port Earpieces

WPEH	Large black "across ear" earpiece.
WPEB	Black Earbud earpiece.
WPTEP	Acoustic tube "quick disconnect".

Chargers:

X6WC-*	6 way desktop charger includes AC/12VDC PSU.
XDTC-*	Desktop charger incl: AC/5VDC USB-C cable & plug pack.
XMVC	Mobile charger (requires XDCC-RJ or XIC cable with junction box).

Spares:

	(order options as required)
X10DRSM-PU2	Spare Pro Plus Mobile Handset.
X10DRMD-PU2	Spare Pro Plus Mobile Gateway.
X10DRSM-EX2	Spare Elite Plus Mobile Handset.
X10DRMD-EX2	Spare Elite Plus Mobile Gateway.
XSMA2	X10DR Speaker Mic/ X1VG Gateway antenna.
XMPA-ANT	Replacement Multipolarity roof mount - antenna only.
XMAK-ANT	Replacement N-Type rack mount - antenna only.
XSMB-C14	Spare X10DR 1450mA battery.
XVMC-RK	Retrofit Velcro® back cover kit.

Service Accessories :

XRPB	XRTG in-line pairing button.
XFPK	X10DR Field Programming Cable Kit.
XATB2*-	X10DR Advanced Service Test Set. (includes speaker and AC/DC power supply)

*Specify AC Plug using suffix- US-EU-UK-AU

can be used with XIPB

Available from your local X10DR dealer or on-line: www.X10drglobalstore.com.

Install Accessories:

XMDM2	Multi-position mounting bracket. (for Std gateway, XMVC & X10DRMC)
X3MK	3 way gateway mounting bracket.(includes 3 x XIC-0.15 interface cable)
X3MK-B	3 way mounting bracket as above but inbuilt DC back-up.
XPB-C14	1450mA "after hours" power bank (requires XIC-0.5 cable).
XMPA	Multi-polarity NMO roof or rack mount 2dBi antenna kit includes 5.2m LMR200 type coax/ RP SMA-M.
XMAK	Multi-polarity N-Type rack mount 2dBi antenna kit includes 5.2m LMR200 type coax/ RP SMA-M.
XIC-0.5	0.5m shielded 6mm interface cable, Black, M-M
XIC-0.15	0.15m shielded flat interface cable, Black, M-M.
XIC-0.4	0.4m shielded flat interface cable, white, M-M.
XIC-1.5	1.5m shielded flat interface cable, Black, M-M.
XIC-1.8	1.8m shielded flat interface cable, white, M-M.
XIC-6.0	6.2m shielded flat interface cable, white, M-M.
XIC-10	6.2m shielded flat interface cable, white, M-M.
XIC-25	10m shielded flat interface cable, white, M-M.
XEC-4.5	25m shielded extension 6mm cable, Black, M-F
XFSB	FireFront™ junction box for multi (3) gateway handsfree installations. Order XIC cables as required
X5JB (V2)	Smart Junction Box: Dual radio/ 3 Gateway. Order XIC cables as required
XDIA	2 way junction box.#
XJB	Junction box - up to 6 X10DRs.#ø
XDCF	Inline 12 volt DC Low pass filter (helps reduces residual noise) (includes XIC-0.15 15cm cable)
XDCI	15W in-line DC-DC isolator - up to 3 X10DR gateways. (includes XIC-0.15 15cm cable)
XDCC	1.5m 12VDC power cable for XJB/XPB. (Molex 4P connector)
XDCC-RJ	1.5m 12VDC fused power cable for mobile charger (RJ45 connector)

XCA- Radio Cable Adaptor. ** radio model specific*¹ (Refer to XCA Master Charts on www.x10dr.com Support page)**

XCA-APX	Suits Motorola APX/XTL	
XCA-M26	Suits Motorola 26 pin Mototrbo	
XCA-M26T	Suits Motorola 26 pin MTM5400 Tetra	
XCA-M16	Suits Motorola 16 pin GM360/MCX/PM400/CDM etc	
XCA-M16T	Suits Motorola 16 pin MTM800 Tetra	
XCA-H26	Suits Hytera MD68/78X/MT68/78X	
XCA-HXG	Suits Harris XGT/M7300	
XCA-X25	Suits Harris XL-185M/200M DB25	
XCA-X44	Suits Harris XL-185M/200M DB44	
XCA-RJi	Suits Icom Mic socket interface	
XCA-I15	Suits Icom DB15HD:for F5011/F6011/ F5021/F6021/F5121D	
XCA-I25A	Suits Icom DB25:IC-F9511/9521/ 5061/5062 etc	
XCA-VM9	Suits Kenwood/EFJ VM900 DB25	
XCA-K15D	Suits Kenwood DB15HD:NX720/3720/TK7360/7302/D840 etc	
XCA-K15S	Suits Kenwood DB25 TK7360/8360	
XCA-K25	Suits Kenwood DB25:NX700,TK5710/5720/8180 VM5000	
XCA-RJK	Suits Kenwood Mic socket interface	
XCA-R15	Suits BK/RELM G/DMH radios	
XCA-R25	Suits BK/RELM DB25 P25 radios	
XCA-SCG	Suits Sepura SCG Tetra radios	
XCA-SRM	Suits Simoco DB15: SRM9000	
XCA-SD6	Suits Simoco DB15: SDM600	# Not recommended for Mototrbo, DMR or TETRA radios - use XDCI
XCA-SD7	Suits Simoco DB26HD-F: SDM700	
XCA-T15	Suits Tait DB15 TM8000/9000(Non DMR)	ø when connecting more than four X10DRs also order 1 x XDCC.
XCA-T15D	Suits Tait TM9300 DMR radio	
XCA-V25	Suits Vertex DB25: VX5500 etc.	
XCA-EXP	Suits Cobham Explorer Sat Link	
XCA-U25M	Build your own DB25 interface	
XCA-CUS*	Custom configurations	
	*MOQ 100 - Call for pricing - delivery	
		* ¹ Note: While we endeavor to verify operation on referenced radio models, due to constant enhancements by their manufacturers, we suggest you first verify correct operation on your specific model radio for operational suitability.

Replacement & Installation Accessories



XDTC
Desktop Charger



X6WC
6 Way charger



XSMB-C14
Replacement Battery
1450mA Li-Pol



XMVC
Mobile charger



XMDM2
Multi directional mount
for gateway/XMVC



XMPA
Multi-polarity roof mount
vehicle antenna kit



XSMA2
Replacement Elite/Pro
X10DR handset/XIVG
gateway antenna



XIC-0.15
0.15m Interface (blk) Cable
XIC-0.4
0.4m Interface (wh) Cable
XIC-1.5
1.5m Interface (blk) Cable
XIC-1.8
1.8m Interface (wh) Cable
XIC-6.0
6m Interface (wh) Cable



XIC-0.5
0.5m Interface Cable
6mm diameter



X3MK - X3MK-B
3 way charger mount for XMVC chargers.
includes XDCC-RJ and 3 x XIC-0.15
B Version has with DC battery back up



XFSB-EXT
External mount
Firefront Smart Box



XCCP
Firefront™
Console



XEC-4.5
4.5m Extension
Cable M-F
6mm diameter



XCA- Plus Type 1**
Connects to Radio interface
connector
** specific radio suffix



XDIA
Dual Interface.
Adaptor



XJB
6 way multi unit
junction box



XMG2
Hughes 2100
MSat interface



XPB-C14B
In-line power bank
vehicles with isolated
vehicle batteries.2
Pin DC



XDCCI
15 Watt DC-DC
isolation junction box
Supplies up to 3 gateways
Includes XIC-0.15 cable
Dimensions 50x50mm



XDCCF
DC Low Pass Filter
Includes XIC-0.15
Dimensions 50x50mm



XFSB
Firefront smart box
3 Gateway/ 2 Radio



XSJB (V2)
Dual Radio junction box
3 Gateway/ 2 Radio



XDCC-RJ
12V DC, 3A
fused, 1.5m
cable RJ45



XDCC
12V DC, 3A
fused, 1.5m
cable 2 Pin



XVMC-RK
Velcro® mount
back cover retrofit kit
(for XLMC fitted devices)



XNMC-RK
Non-metal clip
back cover retrofit kit
(for XLMC fitted devices)



While your X10DR has been designed to the highest engineering practices and meticulously manufactured to mission critical standards, like all electronic devices, failures can and will occur. To provide you with a seamless level of support, each X10DR is supported throughout the product's life by a changeover replacement pool. The pool is intended to ensure minimal downtime in the event of a failure. In the event of a failure, you should contact the dealership that you purchased the X10DR from to arrange for service.

Warranty/Non-Warranty Repair Policy / Procedure

1: X10DR DOA (Dead on arrival) failures that occur at time of delivery/initial operation will be replaced with a new item by the Distributor.

2: X10DR failures that occur at any time after this initial delivery and the expiration of the standard or purchased extended warranty period, will be replaced free of charge from **changeover pool** stock. Nominally 2-3 business day turnaround is anticipated from the Distributor being presented with a validated warranty claim and the paid return of the faulty device to the advised service center.

3: Customers with X10DR failures deemed due to tampering, misuse, neglect, etc., will be advised of the determination. The customer may then choose to have the failed device replaced from the changeover pool for a service **changeover fee** at the current published rate or have the device returned to them. The cost to return the faulty goods and for evaluating a non-valid warranty claim may be charged back to the customer at the Distributor's discretion.

Changeover Pool Inventory

To minimize repair turnaround times and user inconvenience, a X10DR changeover pool inventory is provided to allow changeover factory verified devices as being fully operational and meeting the published specifications. These units will appear as new, or near new condition with as new exterior housings (minor blemishes only) and pristine internal factory certified circuitry.

The remaining warranty of any returned faulty device will apply to its replacement unit, or in the case of units replaced for a service fee, a new 6 months factory warranty will apply.

- Customer must return the faulty device at time of changeover (one for one basis).

- *Spare X10DR devices may be purchased for those who prefer to maintain their own inventory for 24 hour operational redundancy.*

Replacing the battery pack

The process is simple and should only take your radio service supplier less than 5 minutes to replace and test.

Replacement of the battery should be ONLY undertaken by a qualified service technician so as to ensure no damage occurs to internal circuitry and to ensure the housing's weatherproof integrity is not compromised. The replacement battery part number is: XSMB-C14 1450mA.





The **XFPK Programming Kit** provides cables that plug between your PC's USB port and the handset's Hirose connector port and the gateway's micro USB connector to enable use of the following software tools:

- The **X10DR User Programming tool** allows you to adjust a number of parameters* on both the X10DR handset and gateway to enable a huge array of user specific customization, added features and systems functionality using the XFPK interface cables and downloaded programming software.
- The **XGALA Gateway Audio Level Adjustment** software tool provides a simple to use real time software alignment tool for setting input and output levels from the gateway to the connected host mobile.
- The **X10DR Firmware Upgrade** tool is available for field re-flashing of future firmware releases as they become available.

All the above are Windows[#] based and can be download at www.x10dr.com (#Windows 10 OS recommended)

*download X10DR **Programming Parameters Guide** at: www.x10dr.com.



XFPK
Field Programming kit

The **XATB2 Advanced Test Box** allows you to verify the units operational status quickly and effortlessly. It is ideal for self maintained users. It's array of switches and lights makes operation verification or fault finding a breeze. Includes speaker and AC power pack.



RADIO AND TELEVISION INTERFERENCE

The equipment described in this manual generates, uses, and radiates radio-frequency energy. If it is not installed and used correctly—it may cause interference with radio and television reception.

CE DECLARATION

This equipment has been tested and found to comply with the following harmonised European Norms:

•EN300328 (radio and telecommunications terminal equipment)
•EN55024 (electromagnetic immunity) •EN55022 Class B (electromagnetic emissions) •EN 60950 (electrical safety) •EN301489 (electromagnetic compatibility and radio spectrum matters) Based on the results of these tests, Wireless Corporation declares that the above mentioned devices conform to Article 10.1 of the European Council Directive 89/336/EEC, and their amendment Directive 93/68/EEC, and to the Directive 1999/5/EC and indicates this conformity by the CE-sign on each device. The device must be installed and operated in strict accordance with the instructions given in this user manual. Any changes or modifications to this product that were not specifically authorised will invalidate this declaration.

INDUSTRY CANADA:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC NOTICE

This equipment 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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.

You can determine whether the equipment is causing interference by disconnecting power. If the interference stops, it was probably caused by the equipment. If the equipment does cause interference to radio or television reception, you may be able to correct the interference by using one or more of the following measures:

- Rotate the television or radio's antenna until the interference stops.
- Move the Wireless Microphone farther away from the television or radio.

If necessary, consult your two way radio dealer or an experienced radio/television technician for help. Changes or modifications to this product not authorized by Wireless Corporation Ltd could void the FCC Certification and negate your authority to operate the product.

Notice : Changes or modifications not expressly approved by the party for compliance could void the user's authority to operate the equipment.

IMPORTANT NOTE:

To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

Warranty

Wireless Corporation Ltd (WCL) warrants each new product sold by WCL to be free from defects in material and workmanship under normal use and service. The obligation and liability of WCL under this warranty is limited to the repair or replacement at its factory, at the option of WCL, of any such product which proves defective within the quoted warranty period, twelve (12) months for Wireless Pacific products after delivery, and is found to be defective in material and workmanship by WCL inspection. Products of warranty consideration shall be returned with all transportation charges prepaid to WCL or our nominated local service supplier in shipping containers which are adequate to prevent loss or damage in shipment. WCL will pay the return carriage costs for Wireless Pacific products. Products repaired or replaced under this warranty are warranted for the unexpired portion of the original warranty. This warranty is invalid if the factory-applied serial number, date code label, or product label has been altered or removed from this product. WCL shall not be obligated or liable under the warranty for apparent defects which examination discloses are due to tampering, misuse, neglect, improper storage, acts of nature, physical abuse, normal wear and all cases where the products are disassembled by other than authorised WCL representatives. In addition, WCL shall not be obligated or liable under this warranty unless the date of delivery to the first end user shall be within one (1) month from the date of delivery to the original purchaser, if different from the first end user, and further provided that written notice of any defect shall be given to WCL within thirty (30) days from the date such defect is first discovered. In no event will WCL accept consequential damages for products supplied and are then found to have become defective.

Repairing or Modifying X10DR:

Never attempt to repair or modify X10DR yourself. X10DR does not contain any user-serviceable parts. Disassembling an X10DR, including the removal of external screws and back cover, may cause damage that is not covered under the warranty. If an X10DR has been submerged in water, punctured, or subjected to a severe fall, do not use it until you take it to an WCL Authorized Service Provider. Service should only be provided by WCL or an WCL Authorized Service Provider. If you have questions or for service information, contact WCL or an WCL Authorized Service Provider.

Important Safety and Handling Information



WARNING: Failure to follow these safety instructions could result in fire, electric shock, or other injury or damage to X10DR or other property. Read all safety instructions for any products and accessories before using with X10DR. WCL is not responsible for the operation of, or any damage caused by, third-party accessories or their compliance with safety and regulatory standards.

Keep the X10DR Secure Mic antenna at least 25mm away from your head at all times.

To avoid injury, read all operating instructions and the following safety information before using X10DR. For downloadable versions of the latest X10DR User Guide, visit: www.x10dr.com

Radio Frequency Interference:

Radio frequency emissions from electronic equipment can negatively affect the operation of other electronic equipment, causing them to malfunction. Although X10DR is designed, tested and manufactured to comply with regulations governing radio frequency emission in countries such as the United States, Canada, the European Union, and Japan, the wireless transmitters and electrical circuits in the X10DR may cause interference in other electronic equipment. Therefore, please take the following precautions:

i/Aircraft: Use of X10DR may be prohibited while travelling in aircraft.

ii/Vehicles: radio frequency emissions from X10DR may affect electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle.

iii/Pacemakers: The Health Industry Manufacturers Association recommends that a minimum separation of 15 cm (6 inches) be maintained between a handheld wireless phone and a pacemaker to avoid potential interference with the pacemaker. Persons with pacemakers:

- Should always keep X10DR more than 15 cm (6 inches) from the pacemaker when turned on.
- Should not carry X10DR in a breast pocket.
- Should use the ear opposite the pacemaker to minimize the potential
- for interference. If you have any reason to suspect that interference is taking place, turn X10DR off immediately.
- X10DR may interfere with some hearing aids. If you experience interference, consult the hearing aid manufacturer or your physician for alternatives or remedies.

v/ Other Medical Devices: If you use any other personal medical device, consult the device manufacturer or your physician to determine if it is adequately shielded from radio frequency emissions from X10DR.

vi/Health Care Facilities: Hospitals and health care facilities may use equipment that is particularly sensitive to external radio frequency emissions. Turn X10DR off when staff or posted signs instruct you to do so.

vii/Blasting Areas and Posted Facilities: To avoid interfering with blasting operations, turn off the X10DR when in a "blasting area" or in areas posted "Turn off two-way radio." Obey all signs and instructions.

Exposure to Radio Frequency Energy:

The unit transmits and receives radio frequency (RF) energy through its antennas. The antennas are located at the top edge of the unit. The Wireless Speaker Microphone is designed and manufactured to comply with the limits for exposure to RF energy set by international regulatory agencies, including the FCC of the United States, IC of Canada, MIC of Japan, and the Counsel of the European Union, among others. The unit has been tested and meets the FCC, IC, and European Union RF exposure guidelines for 802.15 operation. To ensure exposure levels remain at or below the maximum safe levels, when carrying the unit ONLY use the Wireless Speaker Microphone with the manufacturer's supplied clothing clip or a non-metallic holder that ensures the antenna remains greater than **25mm (1 inch)** from your head and body at all times. An external antenna is connected to the output connector on the mobile charger. Always keep your body at least 20cm (8") from the vehicle mounted external antenna.

Potentially Explosive Atmospheres:

Turn off all non-intrinsically safe (IECEx/ATEX) approved X10DR when in any area with a potentially explosive atmosphere. Do not charge any X10DR and obey all signs and instructions. Sparks in such areas could cause an explosion or fire, resulting in serious injury or even death. Areas with a potentially explosive atmosphere are often, but not always, marked clearly. Potential areas may include: fuelling areas (such as gas stations); below deck on boats; fuel or chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles (such as grain, dust, or metal powders); and any other area where you would normally be advised to turn off your vehicle engine.

Battery Replacement:

Do not attempt to replace the rechargeable battery in X10DR yourself. The battery should be replaced only by WCL or an WCL Authorized Service Provider. The battery should be re-cycled/disposed of thoughtfully.

Antenna Replacement:

Only use the antennas supplied. Use of other antenna types will void type approval.

This radio transmitter (IC:11443A-XH2/XG2) was approved by Industry Canada to operate with the antenna types listed below the maximum permissible gain and required antenna impedance for each antenna type indicated. Types of antennas is not included in this list, having a higher gain than the maximum gain indicated this type are strictly prohibited for use with this device.

Cet émetteur radio (identifier le dispositif par numéro de certification ou le numéro de modèle de la catégorie II) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-après le gain maximal autorisé et de l'impédance d'antenne requise pour chaque type d'antenne indiqué. Types d'antennes ne sont pas inclus dans cette liste, ayant un gain supérieur au gain maximum indiqué ce type sont strictement interdits pour une utilisation avec cet appareil.

Note: the distance for Head SAR is 25 mm and Body SAR is 0 mm.
 Note: la distance pour la tête SAR est de 25 mm et le corps SAR est de 0 mm.

Informations importantes de sécurité et de manutention



AVERTISSEMENT: Le non-respect de ces consignes de sécurité peut provoquer un incendie, de choc électrique ou d'autres blessures ou de dommages à X10DR ou d'autres biens. Lisez toutes les instructions de sécurité pour tous les produits et accessoires avant d'utiliser avec X10DR. CMT n'est pas responsable de l'exploitation, ou tout dommage causé par des accessoires tiers ou de leur conformité aux normes de sécurité et réglementaires.

Pour éviter toute blessure, lisez toutes les instructions et les consignes de sécurité suivantes avant d'utiliser X10DR. Pour les versions téléchargeables de la dernière version du Guide de l'utilisateur de X10DR, visitez: www.wirelesscorp ltd.com

Radio Frequency Interference:

L'émission de fréquences radio émises par les équipements électroniques peuvent affecter négativement le fonctionnement des autres appareils électroniques, les obligeant à un dysfonctionnement. Bien X10DR est conçu, testé et fabriqué conformément aux règlements régissant l'émission de radiofréquences dans les pays comme les États-Unis, le Canada, l'Union européenne et le Japon, les émetteurs sans fil et les circuits électriques dans le X10DR peut provoquer des interférences avec d'autres équipements électroniques. Par conséquent, s'il vous plaît prendre les précautions suivantes:

i / Avion: L'utilisation de X10DR peut être interdite dans les avions.

ii / Véhicules: les émissions de radiofréquences par des X10DR peuvent affecter les systèmes électroniques des véhicules à moteur. Vérifiez auprès du fabricant ou de son représentant votre véhicule.

L'exposition à l'énergie radioélectrique :

L'unité émet et reçoit des fréquences radio (RF) par l'intermédiaire de ses antennes. Les antennes sont situés au niveau du bord supérieur de l'unité . Le Président de microphone sans fil est conçu et fabriqué pour respecter les limites d'exposition à l'énergie RF fixées par les organismes de réglementation internationaux, y compris la FCC des États-Unis , du Canada IC , MIC du Japon , et l'avocat de l'Union européenne , entre autres . L'appareil a été testé et répond aux FCC , IC , et l'Union européenne RF normes d'exposition applicables 802.15 opération. Pour assurer des niveaux d'exposition restent égales ou inférieures aux limites maximales de sécurité , pour transporter l'appareil , utilisez uniquement le Président de microphone sans fil avec fourni des vêtements clip de fabricant ou un support non métallique qui assure l'antenne reste supérieure à **25 mm (1 po)** du votre corps à tout moment. Une antenne externe est connectée au connecteur de sortie du chargeur mobile ou au connecteur de sortie de l'amplificateur bidirectionnel XBDA . Toujours garder votre corps au moins 20 cm (8 ") de thevéhicule antenne externe installée . Le XBDA n'est approuvé pour une utilisation avec l'unité X - Ponder lorsque conformément à la réglementation en matière d'homologation de chaque pays .

Atmosphères explosibles:

Désactive X10DR dans des zones avec une atmosphère potentiellement explosive. Ne chargez pas X10DR, et respectez tous les panneaux et instructions. Des étincelles dans de telles zones pourraient causer une explosion ou un incendie, causant des blessures graves ou même la mort.

Les zones à atmosphère potentiellement explosive sont souvent, mais pas toujours, clairement indiquées. Les zones potentielles comprennent: les zones de carburant (comme les stations d'essence), au-dessous du pont des bateaux, de carburant ou de transfert ou au stockage de produits chimiques, les véhicules utilisant du gaz de pétrole liquéfié (comme le propane ou le butane), des zones où l'air contient des produits chimiques ou des particules (le grain, la poussière ou les poudres métalliques) et tout autre endroit où il vous serait normalement recommandé d'arrêter le moteur de votre véhicule. Note: la distance pour la tête SAR est de 25 mm et le corps SAR est de 0 mm.



Headset use warning

Headsets and earpieces used with this product are capable of delivering sounds at loud volumes. Exposure to such sounds can result in permanent hearing loss damage. The volume level may vary based on conditions such as host radios volume settings Please read the following safety guidelines below prior to using a headset or earpiece:

1. Prior to using this product follow these steps:

- Before putting on the headset, turn the volume control to its lowest level,
- Put the headset on, and then slowly adjust the volume control to a comfortable level.

2. During the use of this product:

- Keep the volume at the lowest level possible and avoid using the headset in noisy environments where you may be inclined to turn up the volume;
- If increased volume is necessary, adjust the volume control slowly.
- If you experience discomfort or ringing in your ears, immediately discontinue using the headset and consult a physician.

With continued use at high volume, your ears may become accustomed to the sound level, which may result in permanent damage to your hearing without any noticeable discomfort. Using a headset while operating a motor vehicle, motorcycle, watercraft may be dangerous, and is illegal in some jurisdictions. Check your local regulations and laws.

Charging your X10DR:

To charge X10DR, use only the WCL mobile, desktop chargers or charge via XEBC USB charging cable.

When you use the WCL desktop charger to charge X10DR, make sure that the power adapter is fully assembled before you plug it into a power outlet. Then insert the WCL AC/DC plug pack firmly into the power outlet. Do not connect or disconnect the WCL AC/DC plug pack with wet hands. The WCL AC/DC plug pack may become warm during normal use. Always allow adequate ventilation around the WCL AC/DC plug pack and use care when handling. Unplug the WCL AC/DC plug pack if any of the following conditions exist:

- 1/ The power cord or plug has become frayed or damaged.
- 2/ The adapter is exposed to rain, liquid, or excessive moisture.
- 3/ The adapter case has become damaged.
- 4/ You suspect the adapter needs service or repair.
- 5/ You want to clean the adapter.

Cleaning your X10DR:

Clean X10DR immediately if it comes into contact with any contaminants that may cause possible malfunctions—for example, ink, dyes, makeup, dirt, food, oils, and lotions. To clean X10DR, unplug all cables and turn off X10DR (press and hold the manual On/Off button). Then use a soft, slightly damp cloth. Don't use abrasive household or industrial cleaners, aerosol sprays, solvents, alcohol, ammonia to clean X10DR.

Connectors and Press Buttons:

Never force a connector into a port or apply excessive pressure to a button, because this may cause damage that is not covered under the warranty. If the connector and port don't join with reasonable ease, they probably don't match. Check for obstructions and make sure that the connector matches the port and that you have positioned the connector correctly in relation to the port. Not all Hirose 6 pin accessories are fully compatible with X10DR. Under some conditions, certain accessories may affect X10DR wireless performance. Reorienting or relocating X10DR and the connected accessory may improve wireless performance.

Acceptable Temperature Extremes:

X10DR is designed to be normally operated and stored in temperatures between -20° and 55°C (-4° to 122°F). Lower or higher temperature conditions might shorten battery life or cause X10DR to temporarily stop working correctly. Leaving X10DR in a parked vehicle or in direct sunlight can cause X10DR to exceed these storage or operating temperature ranges. Avoid dramatic changes in temperature or humidity when using X10DR, as condensation may form within the unit. When you're using X10DR or charging the battery, it is normal for X10DR to get warm. Battery will only charge when its ambient temperature is within safe limits.

Driving Safely:

Use of X10DR while driving a vehicle or riding a motorbike may be distracting. If you find using X10DR disruptive or distracting while driving or riding, pull off the road and park before making or answering a call. Use of X10DR alone or with headphones (even if used only in one ear) while driving or riding is not recommended and is illegal in some countries. Check and obey the laws and regulations regarding the use of mobile devices like X10DR in the areas where you drive or ride.

Air Bag Equipped Vehicles:

An air bag inflates with great force. Do not store X10DR or any of its accessories in the area over the air bag or in the air bag deployment area.

Carrying and handling X10DR:

X10DR contains sensitive components. Do not drop, disassemble, microwave, burn, paint, or insert foreign objects into X10DR. Do not use X10DR if it has been damaged—for example, if X10DR is cracked, punctured, or damaged by water.

Radiation Exposure:



Do not touch the antenna when operational. Keep the Secure Microphone antenna 25mm (1") or more away from your face and body to ensure exposure levels remain at or below the maximum levels. Keep your body at least 20cm/8" from external antennas connected to the gateway mobile charger unit.

Ne touchez pas l'antenne lorsque opérationnel. Gardez sécurisé antenne de microphone 25mm (1") ou Plus loin de votre visage et le corps pour assurer des niveaux d'exposition restent égales ou inférieures aux teneurs maximales. Gardez votre corps au moins 20cm/8 "des antennes externes connectés à l'unité de chargeur mobile passerelle.

Note: the distance for Head SAR is 25 mm and Body SAR is 0 mm.

Specifications

Designed to meet the following global specifications:

Frequency:	2.40-2.48GHz FH Spread Spectrum
Protocol:	802.15.1 based derivative
RF Power:	<100mW Handset / Gateway <100mW
RF Sensitivity	>90dBm
Battery Type:	3.7V @1450mA Lithium Polymer
Battery Life:	>15 Hours @ 30% receive time
Encryption:	AES128 Dynamic key change
RF Connectors:	RP SMA Female
Rated Audio/Dist:	>500mW @5% THD
Hirose Audio port:	Standard
3.5mm Audio port:	Standard
Operating Voltage:	7-16VDC
Operating Temp:	-20°C to +55°C /-4°F to +122°F
Dimensions:	88 x 28 x 63mm (Mic) 80 x 80 x 60 (chgr)
Weight:	150 grams (Mic) 125 grams (chgr)
Shock & Vibration:	Mil Std 810 C/D/E/F
Humidity/Rain/Dust:	IP67 Elite Plus/Pro Plus Mic
Type Acceptance:	CE, FCC, IC, Aust/NZ,

Subject to change or improvement without notice

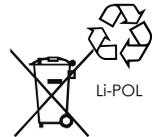
Type Acceptance /Approvals

FCC ID: 2AGEY-XH2/2AGEY-XG2

IC:11443A-XH2 /11443A-XG2



R-NZ



Please recycle thoughtfully

Location of labelling





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