

bluetooth / wifi controller

User Manual





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Overview

The SV SmartSTREAM controller is an all in one, purpose built, high definition sound system for your spa with *Bluetooth*[®] connectivity that also includes a WiFi module for remote access control of your SV Series spa control. The controller has been designed from the ground up specifically for spa pool applications and built to withstand the high ambient temperatures and the humid/wet environment the unit may be exposed to.

The SmartSTREAM controller contains an advanced high efficiency MOSFET four channel 50W amplifier module. This is used to drive four (4) x full range speakers or transducer speakers, dependant on the spa manufacturer's choice. In addition the unit also contains a mono 150W channel amplifier used to drive a subwoofer (if fitted). The Bluetooth module receives audio stream direct from your smart device (phone/tablet) and three (3) x auxiliary audio input sources are provided to enable audio connection to a TV/DVD/iPod Dock/MP3 player (if fitted). At the heart of the SmartSTREAM is a powerful audio processor responsible for audio source switching and allowing complete control over volume, fader, balance, treble, midrange, bass, subwoofer levels and sub frequency adjustments.

The SmartSTREAM controller can operate as a standalone stereo system for your spa or be connected via a data cable to a SpaNET SV Series spa control. When connected to a SpaNET SV Series spa control the SmartSTREAM's WiFi module allows remote control of the SV Series spa control via the Internet. Users can use an App on their smart device (phone, tablet) to remotely connect to and control their spa pool. This is ideal for holiday homes or commercial use. The WiFi module is connected to an external 5dB antenna mounted on the SmartSTREAM enclosure using a SMA connector. Should the user wish to strengthen their WiFi reception a SMA extension cable could be used to enable the antenna to be mounted external to the spa cabinet, or a stronger powered antenna can easily be connected to the SMA connector directly.



Keypad Overview



SmartSTREAM Stereo Operation

Power On/Off

Press and hold the Power On/Off button for 4 seconds to turn the power ON or OFF.

Touchpad Key Assignments



Key Press Operations

There are two key press operations as follows.

Single key press – the key is pressed and released. The function operates when the key is released.

Hold and tap – the hold button is held down and the tap key is pressed. Each release of the tap key operates the function.

Single Key Functions

FUNCTION	KEY	N	IOTES
Power (on /off)	1	Р	ress & hold for 4 seconds to turn on or off
Volume (+)	2	Ir	ncreases amplifier volume
Volume (-)	3	D	Decreases amplifier volume
Play / Pause	4	V	Vorks with Bluetooth source only
Track (-)	5	V	Vorks with Bluetooth source only
Track (+)	7	V	Vorks with Bluetooth source only
Mute	6	Ν	Autes amplifier
Source (Mode)	8	S	 elect input audio source 1 to 4 4 = Bluetooth Each press steps to the next source A chirp sound is produced to reflect the source. i.e. 1 chirp = source 1, 4 chirps = source 4.





Hold & Tap Key Functions

FUNCTION	HOLD KEY	ΤΑΡ ΚΕΥ	NOTES
Bluetooth Connect	8	6	Attempts to reconnect to last connected device
Bluetooth Disconnect	8	7	Kill current Bluetooth connection
Bluetooth Volume (+)	8	2	Increases Bluetooth module volume
Bluetooth Volume (–)	8	3	Decreases Bluetooth module volume
Loudness (on/off)	1	6	Low beep = off, high beep = on
Treble (+)	4	2	Increases audio processor treble filter
Treble (–)	4	3	Decreases audio processor treble filter
Midrange (+)	5	2	Increases audio processor midrange filter
Midrange (–)	5	3	Decreases audio processor midrange filter
Bass (+)	6	2	Increases audio processor bass filter
Bass (–)	6	3	Decreases audio processor bass filter
Subwoofer (+)	7	2	Increases audio processor subwoofer gain
Subwoofer (–)	7	3	Decreases audio processor subwoofer gain
Subwoofer frequency	1	7	 Select subwoofer cut off frequency 1 to 4 1 = Flat (no cut off) 2 = 80Hz 3 = 120Hz 4 = 160Hz Each press steps to the next setting A chirp sound is produced to reflect the setting i.e. 1 chirp = flat, 4 chirps = 160Hz
Fader (+)	1	2	Fades audio output to front speakers
Fader (–)	1	3	Fades audio output to rear speakers
Balance (+)	1	4	Balances audio output to left speakers
Balance (–)	1	5	Balances audio output to right speakers
Factory reset	1	3 & 5	Reset all sound settings and levels to default * Press all three buttons to perform reset



Bluetooth

The SmartSTREAM stereo system has been principally designed for streaming audio from any Bluetooth compatible device. By default when the unit is powered ON it will be in Bluetooth mode and will attempt to connect to the last used Bluetooth device. If the last used Bluetooth device is available it will automatically connect to it and the indicator LED will turn solid green indicating a successful Bluetooth connection. However if a Bluetooth device has not been paired before, or the last used Bluetooth device is unavailable, the unit will remain waiting for a Bluetooth connection and the indicator LED will be flashing green until a connection is made.

Bluetooth Indicator LED

The Bluetooth indicator LED easily identifies the status of the Bluetooth module:

LED	STATUS
On Steady	Bluetooth connected successfully and selected as audio source
Flashing	Bluetooth waiting for connection and selected as audio source
Off	Audio source other than Bluetooth selected or unit powered off

Pairing

The Bluetooth module will follow the naming format of "SpaNET SV-AMP-XXXX" where XXXX is the last four digits of the Bluetooth module's serial number. This name appears on the smart device (phone/tablet/PC) list of Bluetooth devices to connect to.

- 1) Ensure the SmartSTREAM system has Bluetooth mode selected with the Bluetooth indicator LED flashing
- 2) Search for Bluetooth devices from your smart device (phone/tablet/PC)
- 3) Select the **SpaNET SV-AMP-XXXX** device from the list to pair with it (Note: no pin is required)
- 4) Your smart device should automatically pair with the SmartSTREAM module

Once paired the SmartSTREAM keypad can be used to control Bluetooth functions such as volume adjustment, skip track, play/pause, connect, disconnect.

NOTE: The Bluetooth module produces its own beeps/tones when adjustments are made. (These are most noticeable when the module makes or loses the Bluetooth connection.)

Reconnect a paired device

Once a particular device has been paired to the SmartSTREAM system the Bluetooth module will always attempt to reconnect to that same device. If the Bluetooth signal has been lost/dropped by taking the paired device out of range, or if the SmartSTREAM system has been powered on before the last used device was available you can force the Bluetooth module to reconnect by using the Hold & Tap function. Hold MODE (key 8) and Tap MUTE (key 6).





Unpair / Disconnect Bluetooth Connection

If you wish to unpair/disconnect the current Bluetooth connection so that a different smart device can be paired use the Hold & Tap function. Hold MODE (key 8) and Tap SKIP TRACK + (key 7) to unpair the connection.



Volume Control

Audio volume is a combination of the audio source volume (smart device/TV/DVD/MP3) times the SmartSTREAM amplifier's volume. Where Bluetooth is the audio source, in addition the Bluetooth module inside the SmartSTREAM controller also contains its own volume control. All three volume levels need to be considered when controlling overall volume of the SmartSTREAM stereo system.



For best audio quality both the audio source (smart device/TV/DVD/MP3) and Bluetooth module volumes should be set to maximum and the SmartSTREAM amplifier's volume adjusted to suit. This allows the amplifier to amplify more signal than noise producing the best audio quality.

DEVICE	HOW TO ADJUST VOLUME
Smart Device	Volume adjusted on the smart device itself (recommend setting to maximum)
Bluetooth Module	Adjusted via SmartSTREAM keypad using Hold & Tap function. Hold (key 8) and Tap (keys 2 or 3) to increase or decrease volume (recommend setting to maximum) NOTE: A beep will sound when volume has reached its maximum level
SmartSTREAM Amplifier	Adjusted via single press Volume(+) and Volume(–) keys on the SmartSTREAM keypad. NOTE: A beep will sound when volume has reached its maximum level

Bluetooth Module Volume Adjustment (Increase/Decrease)



NOTE: When a Bluetooth connection is established and music is streamed for the first time the SmartSTREAM system will automatically increase the Bluetooth module volume to maximum. However if one device is unpaired and a different device is paired the Bluetooth module volume will reset to the minimum volume level. Each time a new device is paired it is best practice to check the Bluetooth module volume is set to the maximum level.



Loudness

The maximum volume can be boosted by activating the loudness feature via the keypad. When loudness is turned on certain frequencies are boosted, particularly the treble. Whilst the overall volume will be increased the general sound quality will become thinner and not as rich. For best audio quality and richness of sound the Loudness feature should be left off. To toggle Loudness on/off use the Hold & Tap function. Hold POWER (key 1) and Tap MUTE (key 6).



Audio Input Sources

There are four (4) x audio input sources, one being the Bluetooth source, and three (3) x other auxiliary audio input sources available for connection to a TV, DVD, iPod Dock or MP3 player (if fitted). The auxiliary audio sources connect to the SmartSTREAM system using 3.5mm Stereo audio jacks. To select a different audio source single key press MODE (key 8). Each key press steps to the next input source. There are three (3) x indicator LEDs on the SmartSTREAM keypad (labelled 1, 2, 3) which will illuminate with a steady green light to identify which audio source is currently selected. There is a fourth indicator LED for the Bluetooth source (labelled by the Bluetooth symbol). The Bluetooth indicator LED will either be flashing or on steady depending on Bluetooth status (refer Bluetooth section of this user manual for further details).

NOTE: The last used audio source will be remembered when the SmartSTREAM is powered OFF and used when the system is next powered ON

EEPROM (non volatile) Memory

All SmartSTREAM system settings (audio source, volumes, fader, balance, treble, midrange, bass and subwoofer levels/frequency) are stored in non volatile memory (EEPROM) so that the settings are remembered when the system is powered OFF. There is no need to adjust the settings when powered is restored unless desired.

Reset to Factory Defaults

The SmartSTREAM system has been preset to provide optimal sound quality for most transducer speakers and subwoofers. In some instances users may experiment with the sound levels and find the sound quality has become undesirable. To reset all settings to factory defaults press the following three key combination: POWER (key 1) + VOLUME(-) (key 3) + SKIP(-) (key 5) A double chirp sound will be produced to acknowledge the factory reset was carried out.

Factory Reset Key Combination





SmartSTREAM WiFi Module

The WiFi module within the SmartSTREAM controller is independent to the stereo system. The SmartSTREAM controller can be used for its WiFi feature exclusively, it can be used for its Stereo system exclusively, or it can be used for both stereo system and WiFi functionality. Once configured the WiFi module enables remote access to a SpaNET SV Series spa control via the Internet using our SpaNET SpaLINK smart device app.

The SpaNET WiFi module requires an active Internet connection via a wireless router to operate. To be able to access your spa from anywhere at any time the Internet connection/router must remain powered on at all times. The stronger the WiFi signal to the spa area the faster the app will respond. In some situations, dependant on the location and proximity of the spa pool and wireless router, the WiFi signal may need to be boosted by relocating your wireless router or installing a WiFi range extender.



SpaLINK App Overview

The SpaLINK app allows you to connect to, and take control of your SV Series equipped spa, locally or remotely via a WiFi, 3G or 4G network, providing access to your spa from any location at any time. Your Apple[®] or Android[™] smart device becomes a wireless remote for your spa enabling complete control over all spa accessories including pumps, air blowers, and LED spa lights and lighting effects.

In addition the app provides total control over every possible spa configuration setting. There are no shortened menus or minimal access to limited settings, the SpaLINK app allows complete adjustment of all spa control settings as if you were standing in front of the spa.

Installing the SpaLINK App on your smart device

Download and install our app from the App Store[™] for iOS devices. Download and install our app from the Google Play[™] Store for Android devices.

Our app can be found by searching for "Spanet SpaLink"

Register a User Account

Once you have downloaded and installed the SpaLINK app, before your spa and WiFi module can be configured you must first register a user account with SpaNET. Your user account is the portal between the smart device app and your spa. It provides a secure gateway to login and access your spa and allows multiple SV controllers to be configured to the one user account, should you be fortunate enough to own a dual zone swim spa or more than one spa. Your smart device must have a WiFi, 3G or 4G Internet connection to complete the registration.



Step 1: Open the app and click REGISTER



Step 3: Review your registration details then click REGISTER to proceed

K Back	
John Citizen	
johncit1	
john@example.co	m
•••••	
•••••	
Re	egister
-	

Step 2: Enter your details into the registration form



Complete: If your registration was successful the app will automatically login with your details and proceed to the spa list page ready for you to add your spa to your account.



NOTE: Shortly after completing your registration you will receive an email confirming your login details



NOTES FOR REGISTERING A USER ACCOUNT:

- 1) If your chosen username has already been taken a "MEMBER EXISTS" error will appear once you click REGISTER. Enter a different username and try again.
- 2) Only one user account can be registered to an email address. If you attempt to register multiple accounts with the same email address a "MEMBER EXISTS" error will appear.
- 3) The chosen username and email address must not have been used before for successful registration with the SpaNET server.
- 4) If you have made a mistake or are experiencing difficulties with your user account registration, or wish to change your details please email <u>info@spanet.com.au</u>

Configure your Spa/WiFi module

Once you have registered a user account with SpaNET you are now ready to configure your spa. The configuration process is a once off setup event that programs the SpaNET WiFi module with your wireless router's login details (SSID and password) to provide Internet access to your spa. Unless your router login details change (i.e. you change ISP) you will never need to run the setup procedure again. The login details will be stored in the SpaNET WiFi module and will be remembered even if power to the spa or router is turned OFF. To complete the process require:

- a) An active WiFi, 3G or 4G Internet connection on your smart device
- b) Your login credentials for your wireless router (SSID name and password)
- c) Router left in default WPA/WPA2 security encryption. DO NOT use WEP encryption.

Step 1: On your spa side keypad press and hold the UP + DOWN buttons simultaneously until the display shows [MODE]

Step 2: Press the DOWN button multiple times until display shows [WIFI]



Step 3: Press the OK button and the display will show [HOT]

Step 4: Press the OK button to activate the Hot Spot mode. The display will briefly show [WAIT]



The above steps place the SpaNET WiFi module into Hot Spot Mode (HOT) enabling your smart device to connect directly to the WiFi module for configuration.



Step 5: If you have just completed your user account registration your app will already be logged in at the spa list screen (refer below)



If you do not see the above screen, please open the app and login with your username and password entered during registration.

Step 7: Your display should change to the following setup screen (refer below).



Step 6: Press on NEW DEVICE to add your spa to your spa list



Step 7a: Press your smart device home button to return to your icons, and navigate to your WiFi settings screen.



Step 8: Select and connect to the SV WiFi network denoted by your SV controller's serial number. No password is required to connect.

<	Settings Wi-Fi	
	Wi-Fi	
~	SV3-11090001-20	? (i)
С	HOOSE A NETWORK	
	DC_HOME	₽ ╤ (j)
	Other	
A	sk to Join Networks	
K	nown networks will be joined a no known networks are availa	automatically.

Wait for a moment to ensure the SV network is connected properly. If no SV network is found in the list repeat steps 1 to 4 on the spa side keypad to reactivate HOT mode and try again.

Step 10: Press on SETUP to begin a WiFi scan to locate your home wireless network. A spinning wait icon will appear whilst the scan is taking place. Wait for the scan to complete before pressing anything else.



Step 9: Once connected to the SV WiFi network go back and re-enter the SpaLINK app. Press on X to close the setup instructions.



Step 11: Select your wireless network for the spa to connect to for Internet access (ensure signal strength is -80db or higher).



NOTE: The WiFi list may display neighboring wireless networks in your area. Select the SSID name that matches your home router.



The wireless network list displays a list of the wireless network SSIDs discovered in proximity to the spa after the WiFi scan. The signal strength of each network is detailed on the right hand side in decibels (db). A basic guide to WiFi signals strengths is as follows:

- -120db is unacceptable -100db is poor, often unstable but usable
- -80db is acceptable
- -70db is decent
- -60db is good
- -40db is excellent

WiFi signal strength is particularly important for reliable communication and operation of the app. **The signal strength of your wireless network should be no less than -80db for reliable operation.** If the signal strength is not acceptable you may need to relocate your wireless router closer to the spa, install a WiFi range extender to boost the signal, or install a higher powered antenna to the SpaNET SmartSTREAM module underneath your spa.

If your wireless network SSID is not discovered you will need to carry out steps to improve the signal strength and perform another WiFi scan. Simply press the refresh button at the top of the screen to re-scan for WiFi networks.



Step 12: Enter the password for your wireless network and press OK.



Step 13: Press OK to confirm the wireless network settings (SSID & Password) have been saved to the SpaNET WiFi module



Notes on Wireless Network Password

Password is case sensitive. You must take particular care when entering the password for your wireless network to ensure it is correct.

The app is unable to confirm your wireless network password is correct. The password you enter will be programmed directly into the SpaNET WiFi module for connecting to your wireless router.

If you type the password incorrectly the SpaNET WiFi module will be unable to login and connect to your wireless router and the whole setup procedure will need to be run again.

Step 14: Your display will now show the screen below advising you to exit the app, return to your WiFi Settings and connect to your WiFi network for Internet access, or turn WiFi OFF to return to 3G/4G Internet access.





Step 14a: Press your smart device home button, navigate to your WiFi settings and select your WiFi network for Internet access.

	Settings Wi-Fi	
<	Wi-Fi ✓ DC_HOME	>
	CHOOSE A NETWORK	
	SV3-11090001-20 🗢 (i)	
	Other	
	Ask to Join Networks	
	Known networks will be joined automatically. If no known networks are available, you will have to manually select a network.	

NOTE: Your smart device may automatically revert to your normal WiFi network by itself.

Step 15: Once connected to your usual WiFi network re-enter the SpaLINK app. Press on the X to close the setup instructions.



Step 16: Enter a name for your spa and press REGISTER



Complete: Your WiFi module is configured and will attempt to connect to the Internet. The app will return to your spa list showing your spa as offline (greyed out).





Spa List Screen

If you have just completed setup or have just logged into the SpaLINK app you will be presented with your spa list page. The spa list page allows you to access your spa, rename your spa, delete your spa, or add a new spa to the list. It also shows if your spa is currently online or offline.



SPA OFFLINE

SPA ONLINE

When you first complete the setup process of adding a spa it will take a few minutes for the SpaNET WiFi module to login to your wireless router, obtain an IP address and register itself on the Internet and show the spa as online. Please just wait and press the refresh button every now and then until the spa shows as online. If the spa fails to show as online after 5 minutes refer to the Troubleshooting Spa/WiFi Module Configuration on the following page.

Online/Offline Spas

Once your SpaNET WiFi module has been configured, so long as there is power to your spa and your wireless router is available for Internet access your spa should show online in your spa list ready for remote access at anytime. However to ensure your spa connection remains stable and to ensure your spa automatically reconnects to the Internet if there is a power outage or your wireless router resets, your WiFi module will periodically refresh its Internet connection. Therefore occasionally you may find your spa appears offline in your spa list. Simply press the refresh button in the top right hand corner to refresh your spa list. Your spa will soon return online.

Furthermore if you happen to press on an online spa to launch the remote access part of the app at the exact moment the WiFi module begins refreshing its Internet connection you may receive a "Communication with the spa has timed out" error. Just return to the spa list, wait a moment and press refresh until the spa returns online.



Edit Spa List

Press on the pencil to edit your spa. You can rename the spa or delete it. To rename your spa just click on the spa name and edit it as required. Press on SAVE to save the new name, or press CANCEL to exit the edit box without saving. Press on DELETE to delete your spa from the list (you may do this if the configuration process was unsuccessful and you need to setup your spa again).

Spa name	SpaNET Der	paNET Demo Spa		
CANCEL	SAVE	DELETE		

Troubleshooting Spa/WiFi Module Configuration

If you have completed the configuration process of adding a spa but it has failed to show online after 5 minutes you should follow these steps to help overcome the problem.

Method 1: Ensure WiFi module has entered Infrastructure Mode

Once you have entered your wireless network password during the setup process the SpaNET WiFi module should automatically change from hot spot mode (HOT) to infrastructure mode (INFR). Occasionally something may occur during the setup process which will prevent this. To ensure your WiFi module is in infrastructure mode follow these steps:

- On the spa side keypad press and hold the [UP] + [DOWN] buttons until display shows "MODE"
- 2) Press the [DOWN] button until display shows "WIFI"
- 3) Press the [OK] button to enter WIFI menu (display will show "HOT")
- 4) Press the [UP] button to change display to "INFR"
- 5) Press the [**OK**] button to confirm INFR (infrastructure) mode (*display will briefly show* "WAIT" and then return to the default temperature display)

After these steps allow the WiFi module another 5 minutes to login to your wireless router and obtain Internet access, then login to the SpaLINK app again and check your spa list. Refresh your list several times until spa appears online.

Method 2: Delete the spa and run the setup process again

The WiFi module requires reasonable WiFi signal strength (-80db or above) from your wireless router as well as a correct password to login to your router and obtain Internet access. During the setup process it is easy to skip past the signal strength without checking it in detail, and it is also easy to make a typing mistake with the network password. To correct these items the spa should be deleted from your spa list and the configuration process carried out again.

1) Open the app and login to your spa list page. Press on the edit pencil, press DELETE and confirm OK to delete your spa from your spa list.



2) Follow the instructions for "Configuring your Spa/WiFi Module" on pages 11-16 to complete the setup process again.

IMPORTANT NOTES:

- a) Ensure you start the configuration process again by carrying out steps 1-4 (page 11) on the spa side keypad to put the WiFi module back into Hot Spot mode (HOT).
- b) Take care to note the signal strength of your wireless network once the WiFi scan is complete and network list is displayed. If your signal strength is not -80db or higher, take steps to improve the signal strength and refresh the network list before continuing.
- c) Take particular care to ensure your wireless network password is entered correctly. Remember the password is case sensitive so you must pay attention to capital and lower case letters. The password characters disappear as you enter them so watch as you are typing to ensure the number or letter is correct and in the correct case.

SV WiFi network not showing in smart device WiFi List

In some rare situations you may find that you are unable to locate the SV WiFi network in your smart device WiFi network list and therefore are unable to complete the configuration process. If this scenario occurs please carry out the following steps:

- 1) Turn the mains power to the spa OFF and leave powered OFF for 2 minutes
- 2) Turn the mains power back ON and wait for the priming sequence to complete and default temperature display to appear
- On the spa side keypad press and hold the [UP] + [DOWN] buttons until display shows "MODE"
- 4) Press the [DOWN] button until display shows "WIFI"
- 5) Press the [OK] button to enter WIFI menu (display will show "HOT")
- 6) Press the [DOWN] button to change display to "RSET" (reset)
- 7) Press the [**OK**] button to confirm and reset the WiFi module to factory default values (display will briefly show "WAIT" and then return to the default temperature display)
- 8) Once the keypad has returned to its default temperature display wait a further 2 minutes before continuing to step 9 (*this allows sufficient time for the WiFi module to properly reboot after the factory reset*)
- 9) On the spa side keypad press and hold the [UP] + [DOWN] buttons until display shows "MODE"
- 10) Press the [DOWN] button until display shows "WIFI"
- 11) Press the [OK] button to enter WIFI menu (display will show "HOT")
- 12) Press the [**OK**] button to confirm HOT (hot spot) mode (display will briefly show "WAIT" and then return to the default temperature display)
- 13) Now the above steps have been completed go back to your smart device WiFi settings and the SV WiFi network should be available in the list. If not, perform a rescan and it should soon appear in the list.



Legal Information

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Android[®] and Google Play[™] are trademarks of Google Inc.

Contains Transmitter Module FCC ID: T9J-RN52

Contains Transmitter Module FCC ID: T9J-RN131,171

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To satisfy FCC RF Exposure requirements for mobile and base station transmission devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operation at closer than this distance is not recommended. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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