Kessil

LED Aquarium Light



AP9X

USER MANUAL



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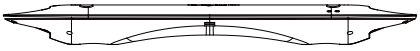
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INSIDE THE BOX



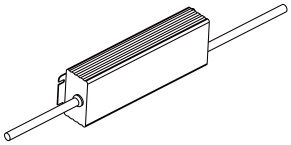
AP9XE



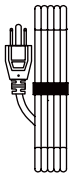
Kessil Sticker



QR Code Stickers
(This code is used in the fixture link process.
SAVE THESE STICKERS)



Power Adapter

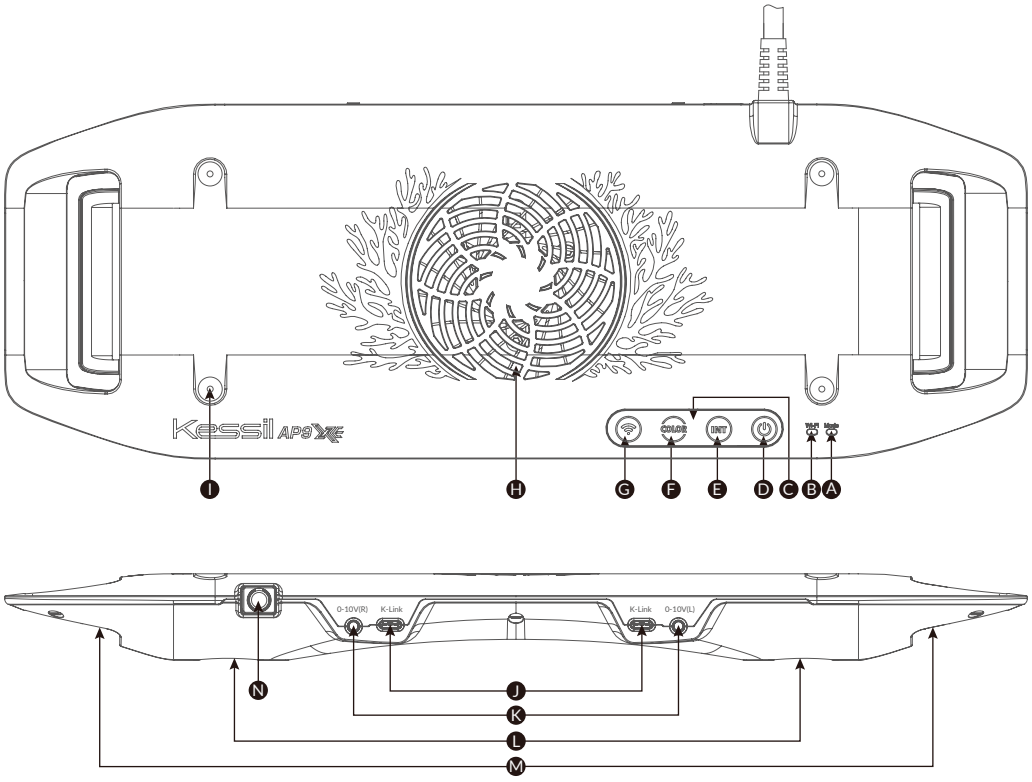


AC Adapter Cable
(Plug type varies from country to country)



Screw Hook &
Hanging Bracket x4

PARTS DIAGRAM



A Mode Indicator
B Wi-Fi Indicator
C Touch Panel - Touch once to activate
D Power - Turn the AP9XE on or off
E Intensity - Adjust the intensity of the light
F Color - Adjust the color of the light
G Wi-Fi - Turn on/off the Wi-Fi signal
H Fan (Air Inlet)
I Screw Holes - For accessories
J K-Link Ports
K 0-10V Output Ports
L Light Source
M Vents (Air Outlet)
N Power Cord

SAFETY INSTRUCTIONS

- DO NOT SHIELD THE UNIT OR COVER WITH ANY OBJECT FOR OPTIMAL PERFORMANCE.
- DO NOT USE OUTDOORS. THIS UNIT IS INTENDED FOR INDOOR USE ONLY.
- DO NOT EXPOSE UNIT TO AN EXTREMELY HUMID ENVIRONMENT OR SUBMERSE UNIT IN WATER. THIS MAY LEAD TO UNIT FAILURE.
- DO NOT USE THE UNIT NEAR FUEL OR CHEMICALS OR IN ANY PROSCRIBED AREA SUCH AS SERVICE STATIONS, REFINERIES, HOSPITALS AND AIRCRAFT.
- DO NOT USE THE UNIT FOR OTHER THAN INTENDED USE.

CONSIGNES DE SÉCURITÉ

- NE RECOUVREZ PAS L'APPAREIL ET NE LE RECOUVREZ D'AUCUN OBJET POUR OBTENIR DES PERFORMANCES OPTIMALES.
- NE PAS UTILISER À L'EXTÉRIEUR. CET APPAREIL EST CONÇU POUR UNE UTILISATION EN INTÉRIEUR UNIQUEMENT.
- NE PAS EXPOSER L'APPAREIL À UN ENVIRONNEMENT EXTRÊMEMENT HUMIDE NI L'IMMERGER DANS L'EAU. CELA PEUT ENTRAÎNER UNE PANNE DE L'UNITÉ.
- N'UTILISEZ PAS L'APPAREIL À PROXIMITÉ DE CARBURANT, DE PRODUITS CHIMIQUES OU DANS DES ZONES RÉGLEMENTÉES TELLES QUE LES STATIONS-SERVICE, LES RAFFINERIES, LES HÔPITAUX ET LES AÉRONEFS.
- NE PAS UTILISER L'APPAREIL POUR UN USAGE AUTRE QUE CELUI PRÉVU.

FCC STATEMENT

AP9XE | Compliance Information

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.
2) This device must accept any interference received, including interference that may cause undesired operation.

Class B Digital Device Notice

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 the 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.

FCC Caution

Modifications: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
Transmitter Positioning: This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

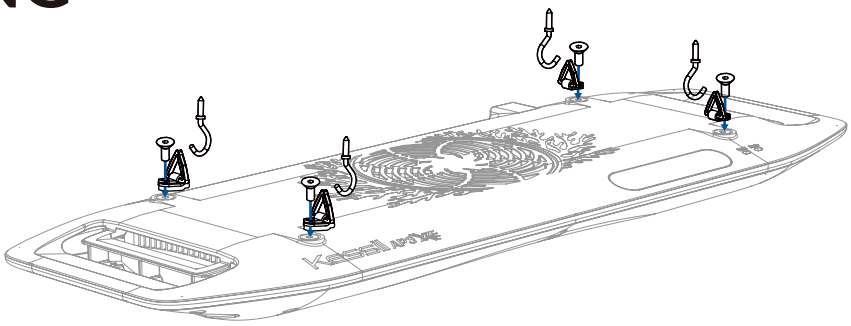
Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To ensure safety, this equipment should be installed and operated with a minimum distance of 20cm (8 inches) between the radiator and your body.

SPECIFICATIONS

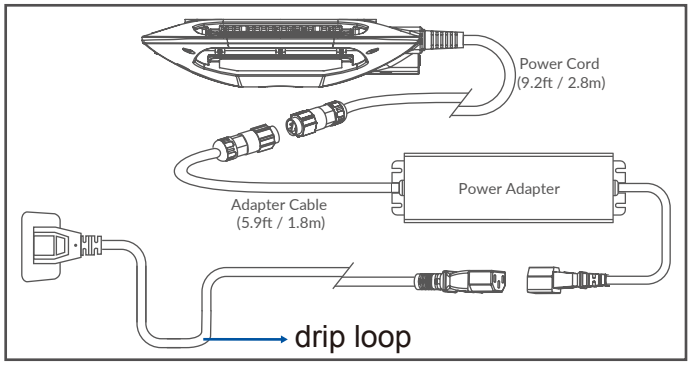
Dimensions	16.46” x 5.71” x 1.42” (418mm x 145mm x 36mm)
Weight	2.29 lbs (1.04 kg)
Spectrum	Tuna Blue + Red + Green + Purple (Violet + Indigo)
Coverage	Up to 48” x 24” Mixed Reef / 36" x 24" for SPS Dominant Systems
Operating Frequency	IEEE 802.11b/g/n(2.4GHz)
Network Encryption Type	WPA-PSK / WPA2-PSK (Does not support WEP, WPA-Enterprise, WPA2-Enterprise, and Monitor Mode.)
Power Adapter	100-240V AC 50-60Hz (Input), 48V DC (Output)
Power Consumption	185W max AC

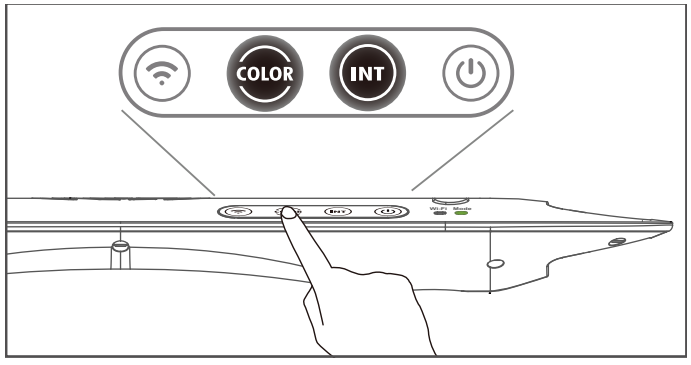
MOUNTING



- Hang the light using the four Screw Hooks and Hanging Brackets. To install, reuse the fixture screws to secure the fasteners with triangular rings.
- The Kessil AP9XE Mounting Arm (KSAGN04) or Hanging Kit (KSAHM01) can also be used.

SET UP





Step 1 Power on the AP9XE

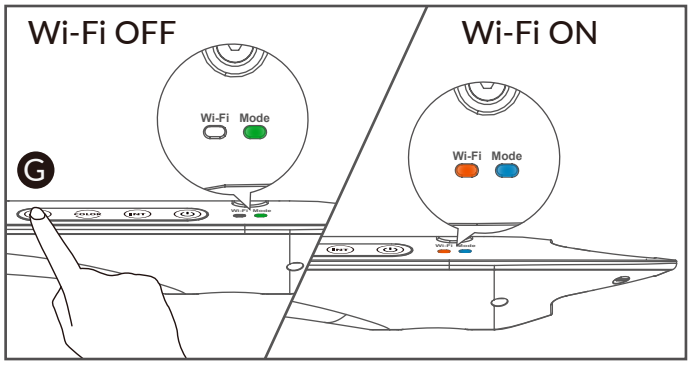
- Connect the AP9XE to the Power Adapter and plug it into a wall outlet.
- Always include a drip loop to prevent water from entering the outlet.

Note: The light will turn on automatically. DO NOT place the AP9XE on any object.

Step 2 Manual Control

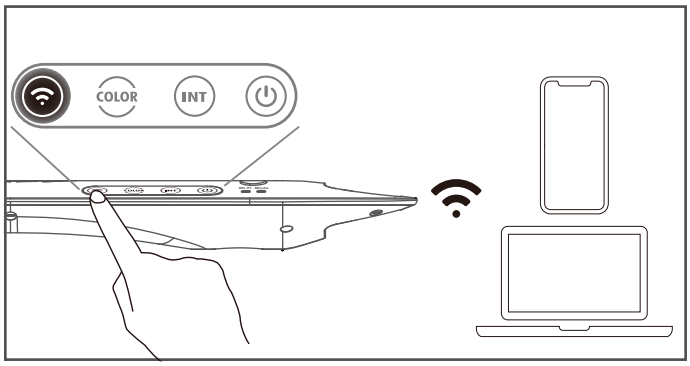
- Gently touch the panel to activate it, then press the ⏻ Power, INT Intensity (INT), or COLOR Color buttons to adjust the light.

Note: Manual touch panel controls will become disabled once Wi-Fi is activated and connected to the network.



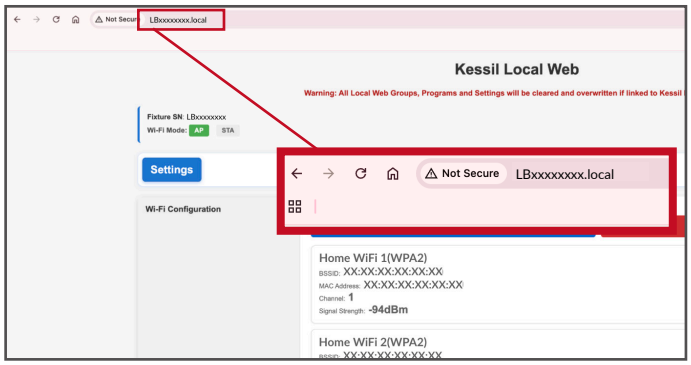
Step 3 Turn On/Off the AP9XE Wi-Fi

- Touch and hold the (G) Wi-Fi button for 3 seconds to turn on Wi-Fi signal. Do the same to turn off Wi-Fi signal.



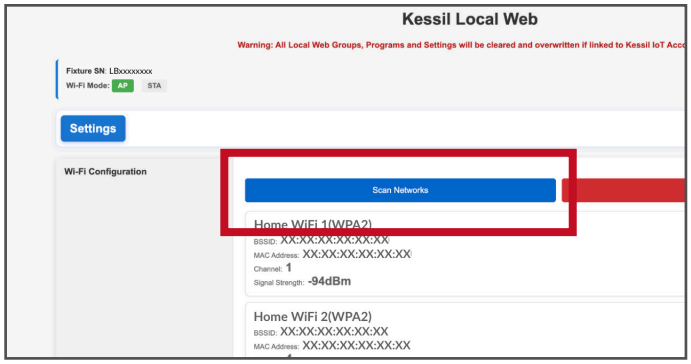
Step 4 Connect to AP9XE Network

- Open the Wi-Fi settings on your device, join the “AP9XE” network on your phone or PC.
- Wi-Fi network: LBxxxxxxxx
  Default Password: xxxxxxxxBL
  (SN backwards, all caps)
- Once connected, the Wi-Fi indicator light will turn blue.



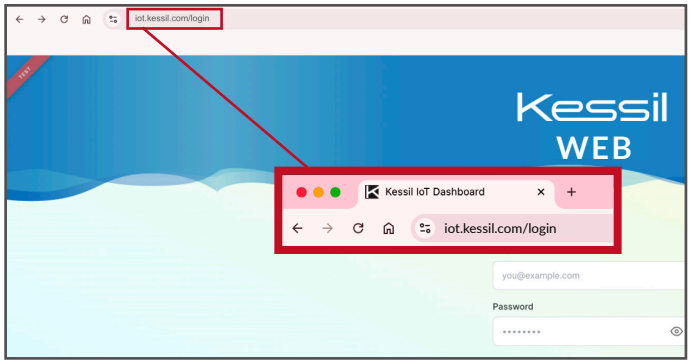
Step 5 Open Setup Page

- Open a web browser and enter *LBxxxxxxxx.local*
  (Replace '*LBxxxxxxxx*' with your specific serial number.)
- But if this does not work, type *http://192.168.1.1* into your browser



Step 6 Connect to Home Wi-Fi

- Tap “Scan Networks”, select your home Wi-Fi, and enter the password.

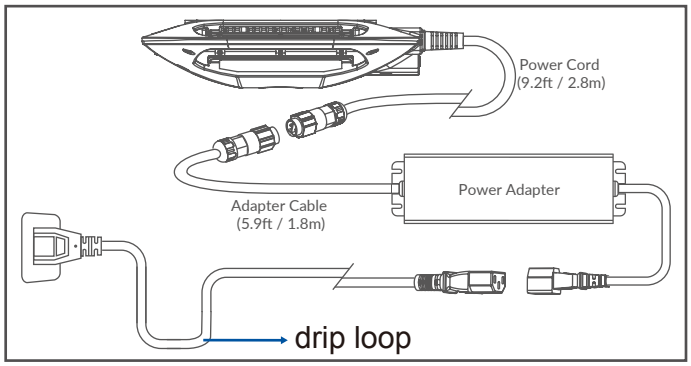


Step 7 Link Fixture to IoT Webpage

- When the Wi-Fi indicator turns solid green, log into the Kessil IoT webpage.
- https://iot.kessil.com/login
- Go to Settings > Link Fixture and scan the QR code included in the package.

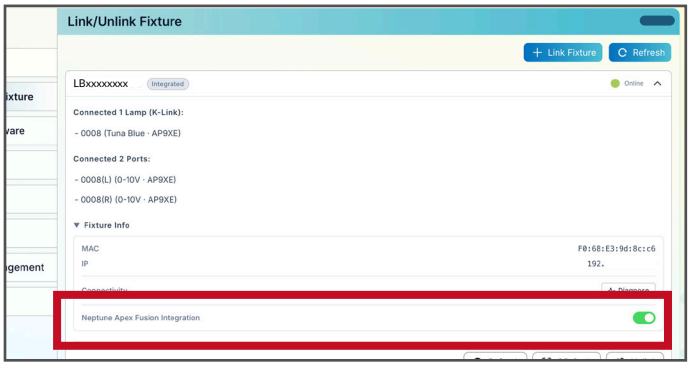
AP9XE TO NEPTUNE APEX

***Complete the initial AP9XE Wi-Fi setup and link your fixture to the Kessil IoT portal before enabling Neptune Apex integration.**



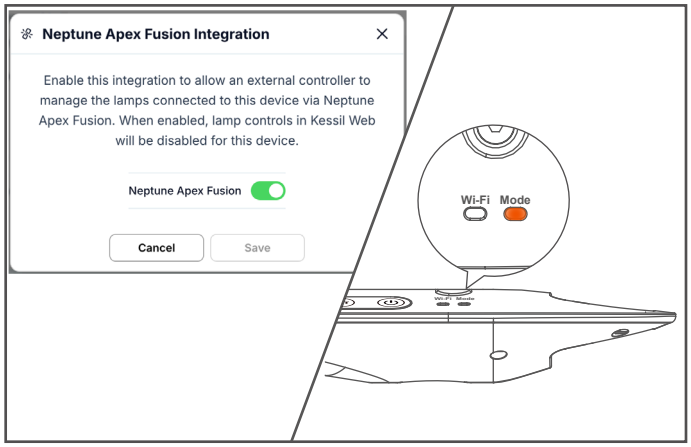
Step 1 Connection

- Make sure both the AP9XE fixture and the Neptune Apex controller are connected to the same 2.4 GHz Wi-Fi network.
- Connect the AP9XE power adapter to a standard wall outlet (do not use an EnergyBar outlet unless set to Always ON).



Step 2 Enable Apex Integration

- Log into your Kessil IoT web dashboard and navigate to Settings > Link/Unlink Fixture from the left navigation panel.
- Click your AP9XE device card to expand Fixture Info.
- Locate the Neptune Apex Fusion Integration toggle switch and switch it to ON.

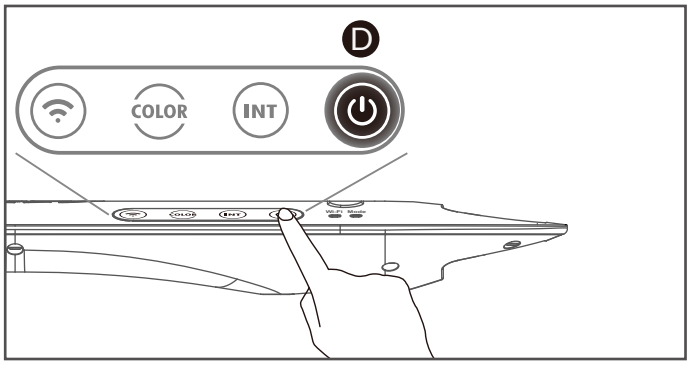


Step 3 Confirm Integration

- When the confirmation dialog appears, verify that local control will shift to Apex and click save.
- Mode LED indicator Solid Blue: Apex Integration is OFF (controlled via Kessil IoT).
- Mode LED Solid Orange: Apex Integration is ON (controlled via Neptune Apex).
- Complete the IoTa Setup Task in Apex Fusion to finalize pairing.

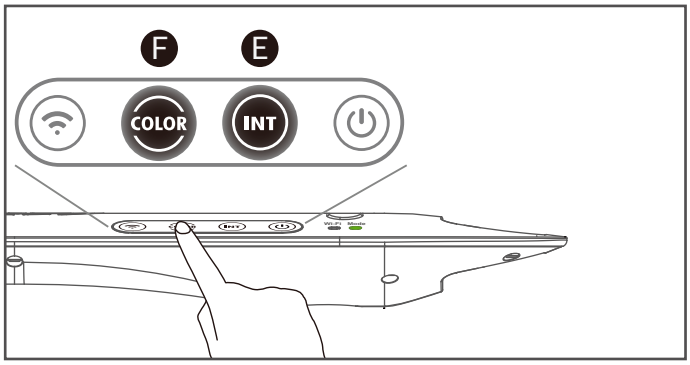
For more Neptune Apex IoTa control, see *kessil.com/support/downloads.php*

CONTROL PANEL



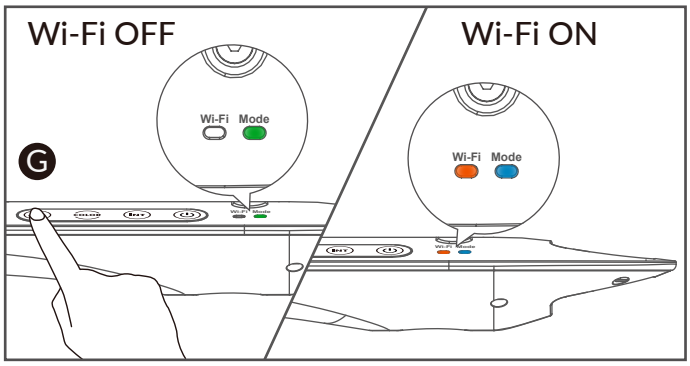
• Turn On/Off the AP9XE

- Touch the Power button to toggle the fixture on or off.
- When the AP9XE is powered off, touching the control panel will also automatically wake and press Power button (D) to turn on the fixture.



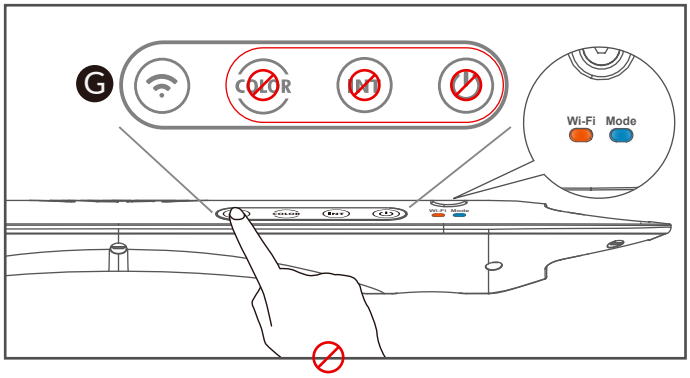
• Manual Control Adjustments

- Touch the Intensity button (E) to cycle through 5 intensity levels (1%/25%/50%/75%/100%).
- Touch the Color button (F) to cycle through 9 distinct color modes.



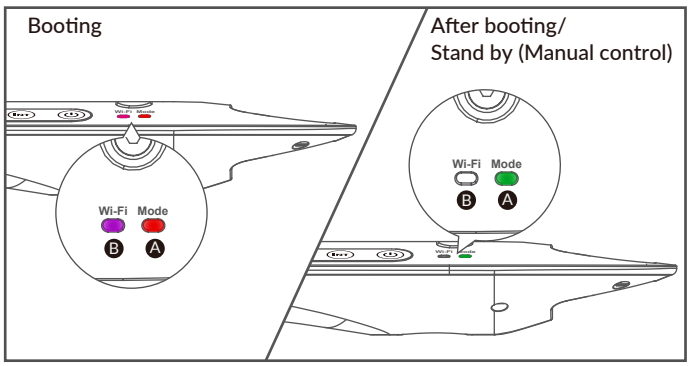
• Turn On Wi-Fi for IoT Connection

- Touch and hold the Wi-Fi button (G) for 3 seconds to activate the internal Wi-Fi signal (Wi-Fi indicator light (B) turns orange).
- Repeat the same action (hold for 3 seconds) to turn off the Wi-Fi signal.



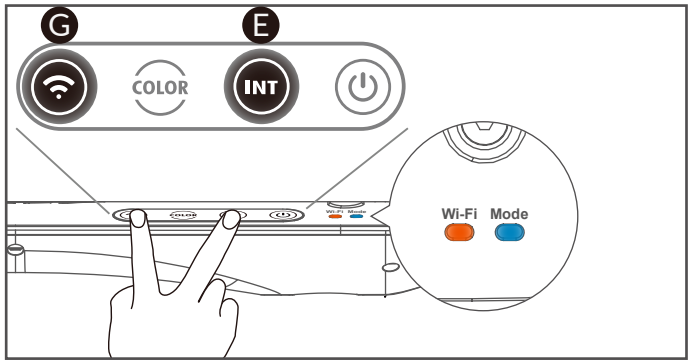
NOTE Control Buttons Disabled

- When the Wi-Fi of AP9XE is turned on (Wi-Fi indicator is ON), control buttons are disabled. Turn off Wi-Fi (press "Wi-Fi" (G) button for 3 seconds) for manual control on touch panel.



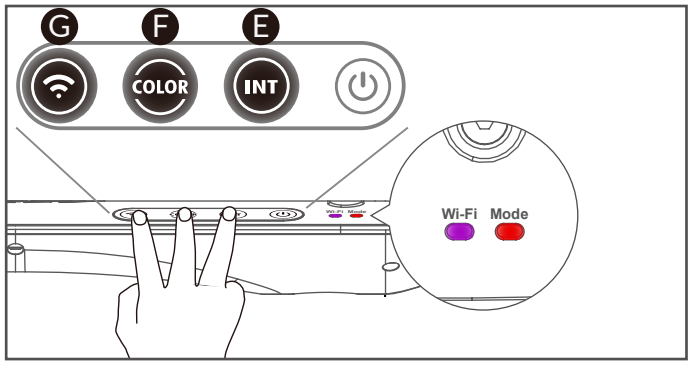
• Device Booting to Manual Control

- The AP9XE takes up to 5 seconds to start up. The Wi-Fi Indicator (B) will temporarily show a solid purple light.
- After booting completes, the Wi-Fi Indicator turns off and the Mode Indicator (A) turns solid green. The fixture is now in local manual mode and ready for button adjustments.



• Reset the AP9XE Wi-Fi Configuration

- Touch and hold the Intensity (E) and Wi-Fi buttons (G) simultaneously for 3 seconds.
- After resetting, the Mode indicator (A) will be solid blue, and the Wi-Fi indicator turns orange.
- Clears current Wi-Fi network credentials so you can reconnect to a new network. User light settings will not be deleted.



• Factory Reset the AP9XE

- Press and hold INT (E), COLOR (F), and Wi-Fi (G) simultaneously for more than 10 seconds.
  * After 10 seconds: Mode turns blinking red, Wi-Fi turns solid purple (Device is booting).
- Erases all custom schedules and configurations, restoring factory default settings. (Go back to Step 3 to reconfigure).

INDICATOR STATES

During initial setup or restart, **Wi-Fi indicator states** will proceed in the following order:

Wi-Fi indicator states

No Light	Wi-Fi off	Wi-Fi is disabled (applies to AP9X/AP9XE)
	AP Mode	**Action**
Solid Purple	Booting	Device is starting up *(Takes 5 seconds)*
Solid Orange	Standby	Ready to be connected
Solid Blue	Connected	Connected by device, ready to configure Home Wi-Fi

Configure your settings by entering **your serial number local address (e.g., LBxxxxxxx.local)** in your browser. If this does not work, type **192.168.1.1** instead, the LED light will show solid red for about 20 seconds as the device switches to STA mode, transition to blinking green while connecting to Wi-Fi, and finally turn solid green when connected to your home network.

	STA Mode *Connected to your home/office router.*	**Action**
Solid Purple	Booting	Device is starting up *(Takes 5 seconds)*
Blinking Purple	Updating	Firmware update in progress. Do not unplug.
Solid Red	Standby/No connection	Ready to connect/ Connection failed *(If it lasts >3 mins, perform a Wi-Fi Reset)*
Solid Green	Connected to IoT website	Successfully connected to your router *(Slave)*
Blinking Green	Connecting to home Wi-Fi	Trying to connect home Wi-Fi

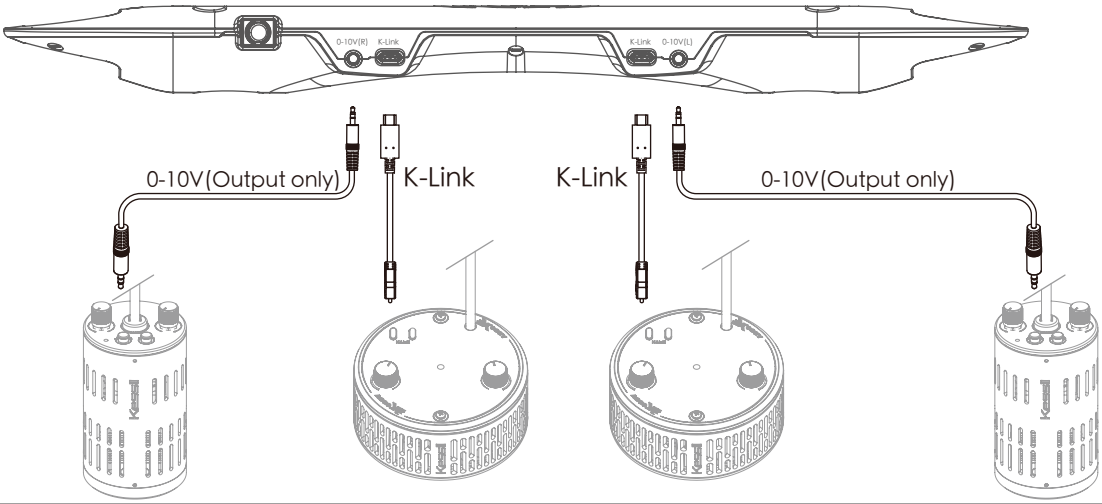
*Once the device is configured in STA mode, it will remain in STA mode across subsequent power cycles.

*If you turn the power off (either via the AC outlet or by unplugging the device), please wait at least 15 seconds before turning it back on.

Mode indicator states

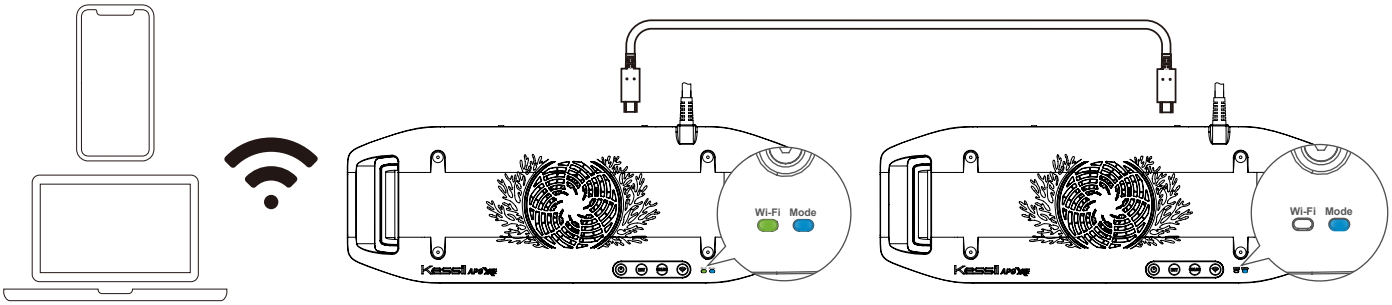
	Mode	Action
Solid Red	Booting	Device is starting up *(Takes 5 seconds)*
Solid Green	Control buttons enabled/Wi-Fi off	Device can be controlled manually/ Wi-Fi is off
Solid Blue	Control buttons disabled/Wi-Fi on	Manual Control is unavailable/ Wi-Fi is on
Solid Orange	Control buttons disabled/ Successfully connected to APEX	Device can be controlled by APEX

LINK MULTIPLE FIXTURES



- Two K-Link ports (J): Connect and control multiple X-series K-Link fixtures using "Kessil IoT" and K-Link Cables. When connecting Kessil Wi-Fi enabled products, make sure to turn off the Wi-Fi signal of the slave fixtures. When controlling them (Tuna Blue only) manually, tuning controls on any light control all other lights in chain.
- Two 0-10V Output ports (K): Connect and control multiple 0-10V fixtures using "Kessil IoT"

DAISY-CHAIN SETUP (UP TO 30 FIXTURES)



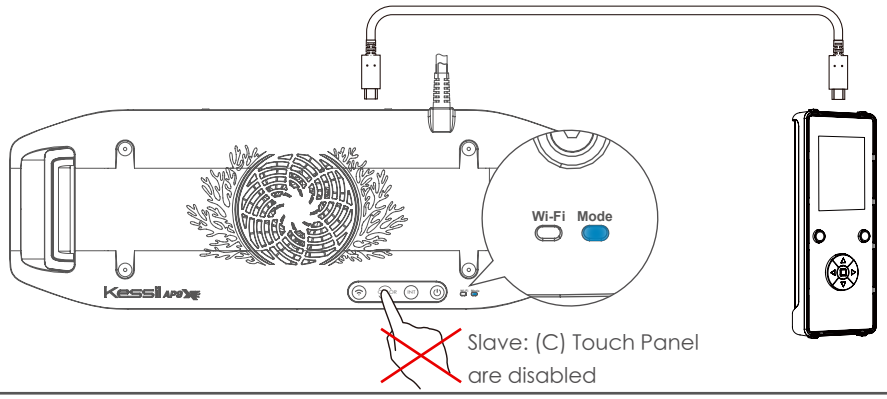
Connect multiple AP9XE and K-Link fixtures together using K-Link cables.

Master Light: Wi-Fi must be ON (Solid Green indicator).

Follower Lights: Wi-Fi must be OFF (No indicator light).

When properly connected, follower units will display a solid blue Mode Indicator, and their onboard control buttons will be disabled.

CONTROLLED BY SPECTRAL CONTROLLER X

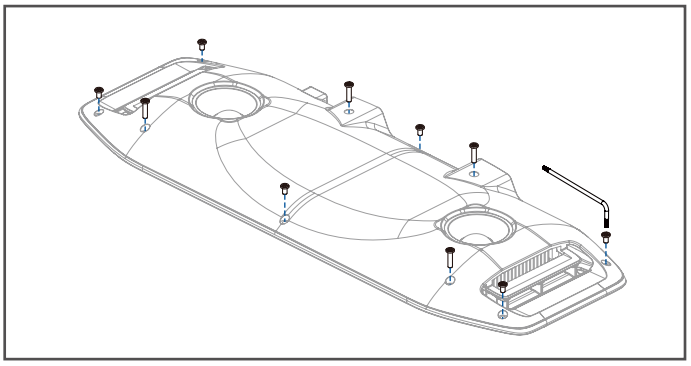


- AP9XE can be connected and controlled through Kessil Spectral Controller X with a K-Link Cable.
- The AP9XE control buttons will be disabled.

MAINTENANCE

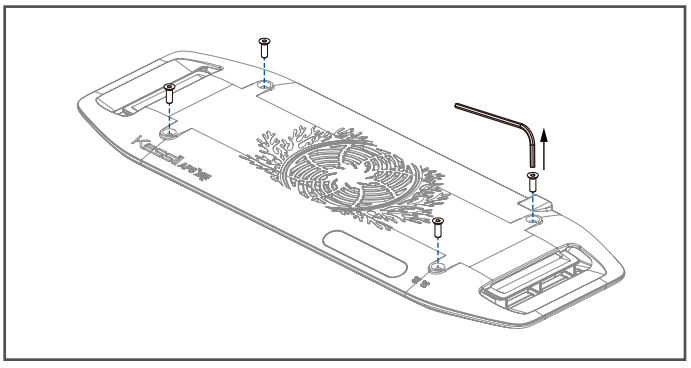
1. Clean the Fan & Vents: Keep the Air Inlet (H) and Air Outlet (M) dust-free. To clean, unplug the unit and either spray compressed air into the venting holes or gently vacuum them.
2. Clean the Light Source (L): Keep the lenses and reflectors clear of water, dust, or dirt. If contaminated, unplug the unit, gently wipe the surfaces with a cotton swab or cloth dipped in isopropyl alcohol, and let them dry.
3. Protect the Ports: Keep the plastic covers plugged into the K-Link (J) and 0-10V Output (K) ports when not in use. Always keep the ports clean.

DEEP CLEANING



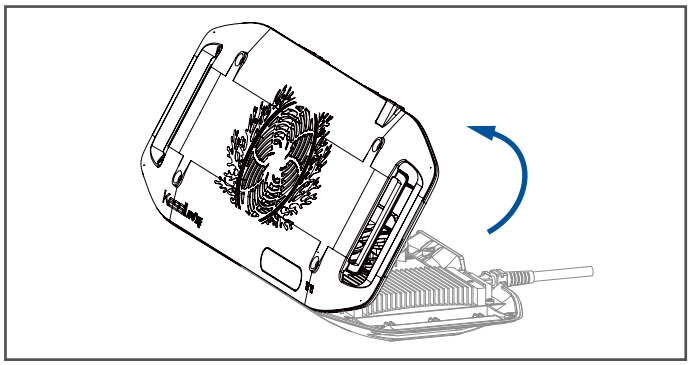
Step 1 Remove Bottom Screws

- Remove 10x M3 bottom screws (T10 Torx).



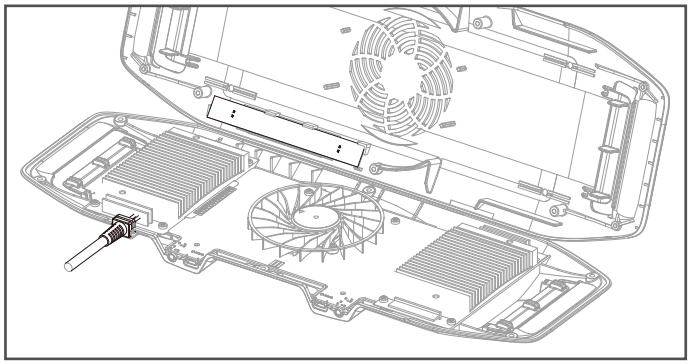
Step 2 Remove Top Screws

- Remove 4x M4 upper cover screws (12mm) using a 2.5mm Hex key (not included).



Step 3 Flip the Cover

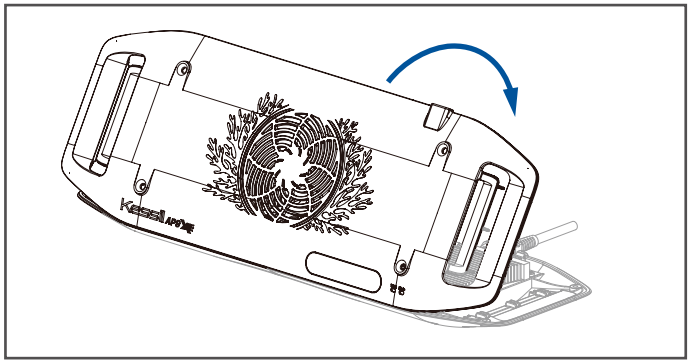
- Carefully flip the cover from the rear.



Step 4 Cleaning

- Remove dust and debris using a dust blower or alcohol wipe.

Note: Do not remove other screws to prevent damaging parts.



Step 5 Reassemble

- Route the touch panel cable and power cord (N) correctly. Replace the cover and secure all top and bottom screws.

Note: Do not over-tighten screws.

TROUBLESHOOTING GUIDE

Please make sure to perform maintenance before doing any troubleshooting.

Problem	Cause and Solutions
Mode Indicator Blue Wi-Fi Indicator Red	Failed to connect to the IoT cloud server, but local network connection is successful. • Verify your home Wi-Fi is active. • Reset the Wi-Fi connection on the AP9XE. Touch and hold Intensity and Wi-Fi for 3 seconds until the Wi-Fi indicator turns orange. (Clears Wi-Fi credentials; saved light settings are retained.) • If the connection to the IoT website still fails, restart your home router.
Light Doesn't Turn ON	Ensure the unit is securely connected (and all cable connections are secure) to the official power adapter.
	Verify the power adapter matches the required electrical specifications.
	Ensure electrical power is active at the AC outlet being used.
	If connected to the IoT website, check your online dashboard to ensure this fixture's group is toggled ON and also at INT > 0.
Unit is flickering	Ensure the device is operating within the specified ambient operating temperature range (below 104°F / 40°C).
	If the unit overheats, it will automatically shut down to protect components.
	Verify the power adapter matches the required electrical specifications.
	Ensure the cooling fan is operating properly and free of blockages.