"RUPS" INSTRUCTIONS

Renewable Universal Power Supply

LTN1-300RUPS	**For use on 3"- 4" round or square pole, rooftop, or wall**
LTN2-300RUPS	**For use on 2" round pole**

READ CAREFULLY BEFORE INSTALLING THIS FIXTURE. RETAIN THESE INSTRUCTIONS FOR FUTURE USE.

- Fixtures must be wired in accordance with the National Electric Code and all applicable local codes.
- This product must be installed in accordance with the applicable installation code by a person(s) familiar with the construction and operation of the product and the hazards involved.

WARNING and ATTENTION:

- Please read instructions prior to installation to ensure you have necessary tools and hardware
- Battery is Lithium Ion. Transportation to/from other locations may have limitations by law
- The battery will stop charging when ambient temperature falls below -4^{o}F or above 140^{o}F. Once temperature returns to this range, battery will function as normal
- Care must be taken during installation as items are odd sizing and heavy weight
- The solar bracket is designed for universal installation. It can be wall-mounted, roof-mounted or pole mounted. Please ensure that the correct hardware is available for the desired installation. Installer is responsible for ensuring that the installation surface or pole, hardware and mounting method is appropriate for any conditions that may be encountered in that location. Lite the Nite assumes no responsibility or liability for improper installation procedure
- If mounting panel on a pole, please ensure pole foundation is solid enough to withstand solar panel(s) and battery box
- For pole mounting installation, pole should be 3 or 4 inches in diameter round or square and made of thick wall steel or Aluminum
- Solar panel bracket should be mounted facing direction that provides most sunlight over longest period
- Adjust solar panel bracket so panel has a minimal 10^{o} incline for self-cleaning
- If using pole mount and under high wind conditions, it is recommended to mount low on pole for greater stability
- Will require two or more people to install

CHARGE CONTROLER ELECTRICAL SPECIFICATION

- Max Solar Input voltage: 50 Vdc or (2x12volt panels in series)
- Max charging Output current 25 amps or 300 watts
- Charging cut-off when battery = 14.2 Vdc
- Floating Charge rate 13.8 Vdc
- Min 9 volts for operation / LED status indication

BATTERY ELECTRICAL SPECIFICATION

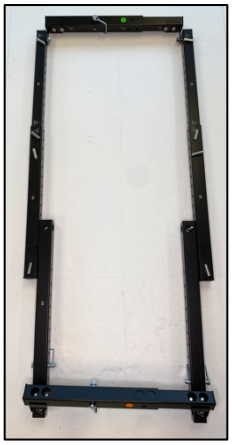
- Operating voltage Min 11.3 Vdc Max 14.2 Vdc Nominal 12.7 Vdc
- Max discharging current 9.5 amps (unless larger fuse installed)
- Max discharge current 30 amps continuous (with larger fuse)
- Max discharge current intermittent 1 min On 1 min Off 40 amps

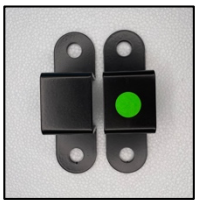
TOOLS/MATERIALS NEEDED:

- Socket wrench with 4” extension and 16mm deep well socket (thin wall)
- Utility Knife or side cutters
- Allen wrench (included in carton)
- Adjustable wrench
- Appropriate mounting screw bolts for rooftop or side structure mounting

LTN1-300RUPS - ITEMS INCLUDED WITH THIS BRACKET:

A. Preassembled solar panel bracket (LTN1-50/100WBKT)
B. (2) Small “U” bolt and/or surface mount brackets
C. (2) Large “U” bolt and/or surface mount brackets
D. (4) End cap plugs
E. (6) “U” Clamps
F. (1) Allen wrench bolt tightener
G. (1) Wrench
H. (8) T-Bolts
I. (1) Y-Cable
J. (1) 10 foot Cable


A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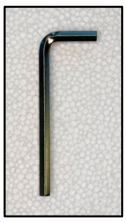
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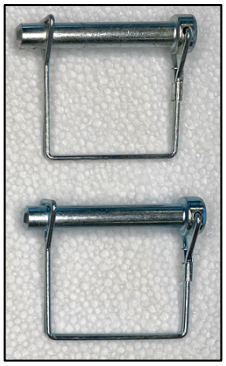
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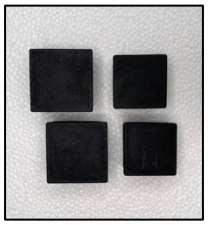
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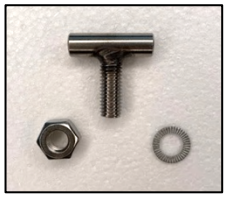

H

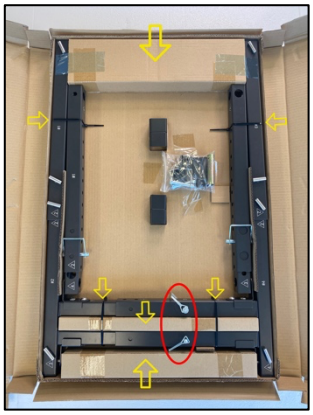
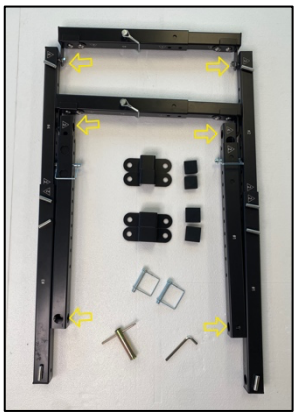
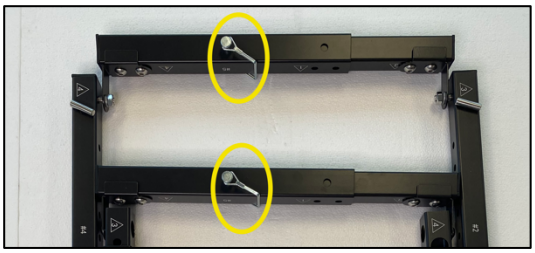

I


J

Open bracket carton
Please be sure all parts remained intact during shipping
Prepare bracket for installation

LTN1-300RUPS

The bracket is pre-assembled to facilitate installation.

NOTE: *It is not necessary to use or match any of the numbers or markings on the bracket.*

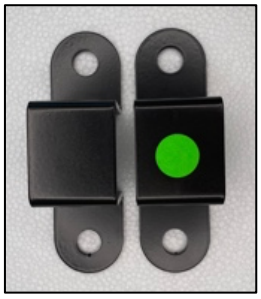
a. Remove zip ties and cardboard fillers (shown above, left image) Note that bracket is in collapsed position (see pin location in red circle)
b. Check for any loose hardware. If necessary, reinstall.
c. Check and tighten hardware in 6 locations (shown above, center image)
d. Remove two pins (E) and expand (widen) the bracket and reinstall two pins (E) (shown above, right image)

INSTALLATION:

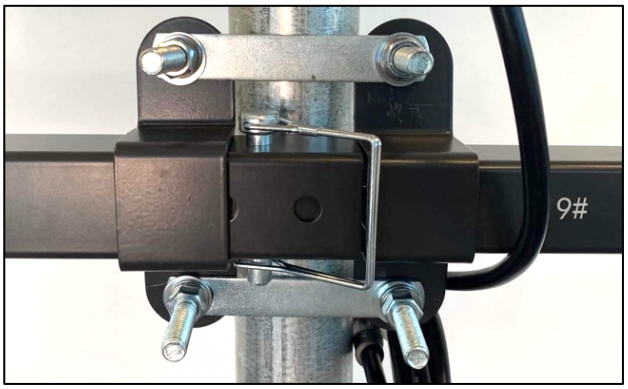
POLE MOUNT:

The following instructions are for **pole-mounting** the solar panel kit. *For **surface mounting**, please see surface mount section page 8*

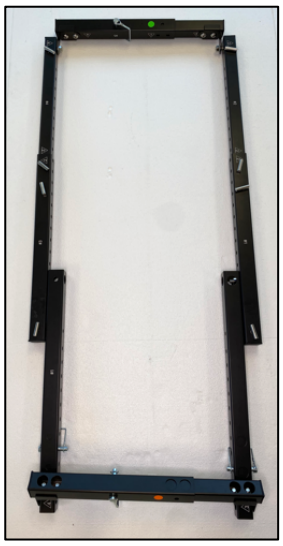
- Please note that there are two large (B) and two small (C) mounting brackets. This is necessary as the crossbars telescope, and one side is larger than the other.



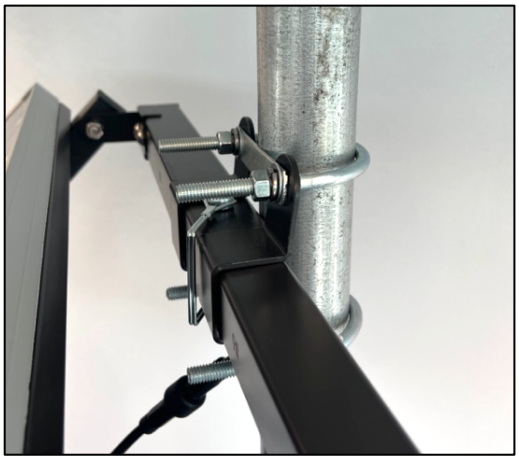

- Mounting brackets will slide together in center location for “U” bolt assembly around pole.
- BE SURE “U” CLAMP (E) IS MOUNTED AWAY FROM POLE



- Take bracket out of box and unfold as shown in picture below



- Adjust lower arms and slightly tighten bolts so cross bracket can still move
- For reference, cross bars will be installed on pole as shown at top and bottom

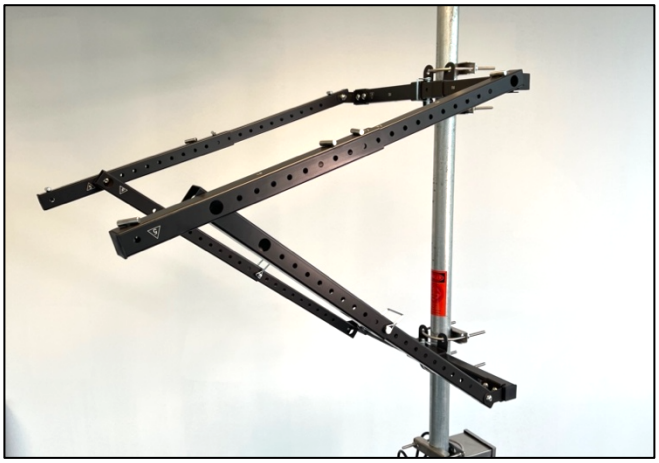


- Confirm that the T-Bolts (H) are loose so that it will be easy to install the solar panels later (should have 1/8” to 1/4” clearance at this stage)

- Attach top mount to pole using appropriate “U” bolts (sold separately), 1 pc of the large mounting bracket and 1 pc of the small mounting bracket. *Be sure to use pipe grip bracket for more secure attachment.*

NOTE: DO NOT OVER TIGHTEN. MAY CAUSE MOUNTING BRACKETS TO BEND/BREAK.

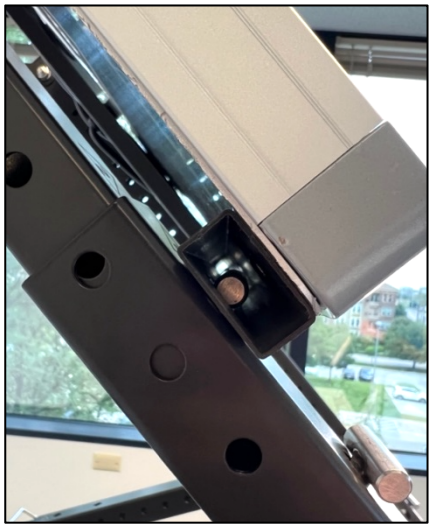
- Slightly raise the bottom crossbar and install lower bracket
- NOTE: upper and lower brackets should NOT be closer than 24 inches
- Final Solar Panel angle adjustment should be made at this time and all bolts tightened



- The top support arms of the bracket should be at approximately 45 degrees for the solar panels to have a good orientation to the sun. The lower support arm can be adjusted to get the correct angle. If the adjustment is not sufficient, then the bottom bracket position will need to be adjusted. Please see the image below for additional detail.
- For northern climates, use bracket hole numbers 3 or 4 for greater angle to catch more sun. For southern locations use hole numbers 5-7 for more direct overhead exposure

- Align the T-bolts (H) so that the slots on the back of the solar panel will slide on appropriately.

- Install the solar panel by aligning glide holes on back and slide into place. Once T bolt (H) heads are inside solar panel hole, tighten all 4 T-bolts (H). Repeat for second solar panel, if needed.
- Once the panels are installed, ensure that all T-Bolts (H) are tight.



- Attach plastic tabs (D) at top ends of each bracket. Leave bottom tabs open for water to escape

- Attached warning sticker to pole for easy read

SURFACE MOUNT:

- Use same process as pole mount but spread mounting brackets (B & C) to corners of bracket
- Be sure to use bolts or bolt screws that can withstand weight of bracket and solar panel(s)
- Secure top brackets to surface using appropriate mounting screws/bolts.
- Adjust arms for appropriate solar panel adjustment mentioned earlier on page 6
- Mount solar panel(s) following procedure explained on page 7

LTN2-300RUPS - ITEMS INCLUDED WITH THIS BRACKET:

LTN2-300RUPS - 2-inch pole top mount

Determine angle of solar panel (figure 4) prior to putting together panel bracket (figure 2) to pole top mount (figure 1). Panel can be adjusted +/- 45 degrees for optimal sunlight exposure.

1. Install pole top mount (figure 1) to panel bracket (figure 2) and secure with two long screws provided.

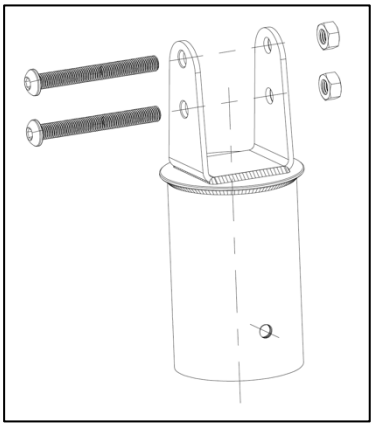


Figure 1

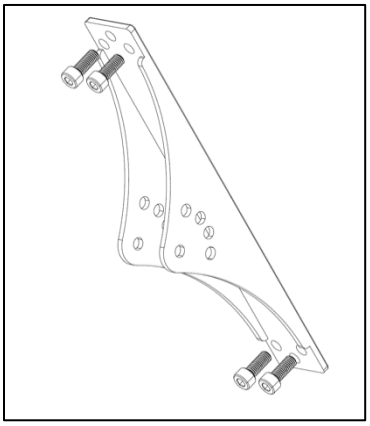


Figure 2

2. Secure panel bracket (figure 3) to back of solar panel (figure 4) with 4 short screws provided.

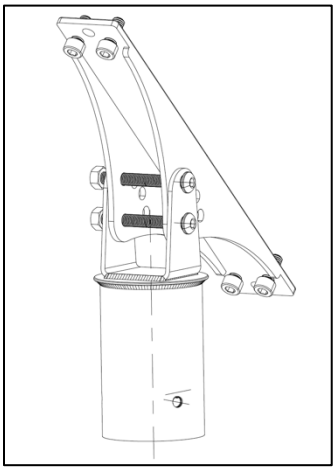


Figure 3

3. The assembled unit should be as shown below (figure 4).

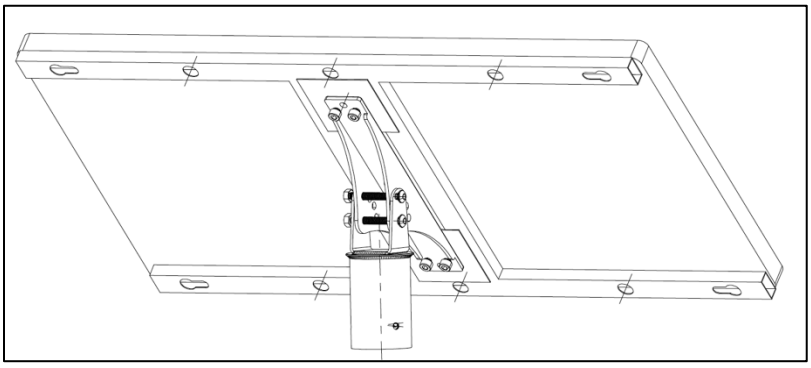


Figure 4

4. Align solar panel in direction for greatest sun exposure throughout the daytime. Utilize 3 screws for tightening the sleeve once placed over pole.
NOTE: Be sure to tighten each screw evenly for even and most secured mounting.

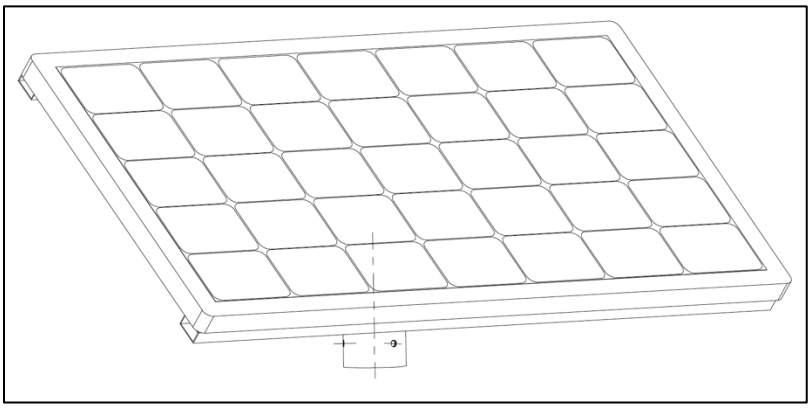
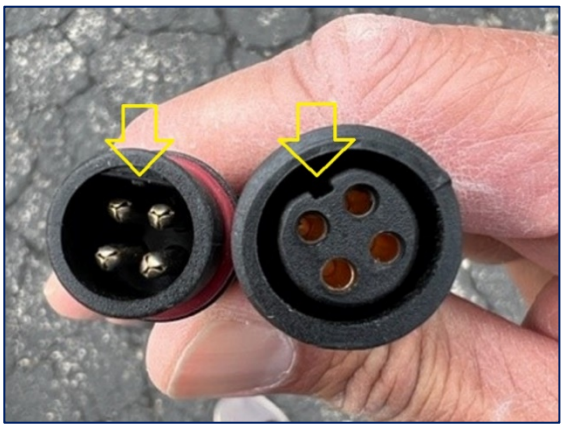


Figure 5

CONNECTING YOUR SOLAR PANEL(S):

- NOTE: for the connectors (I), there is only 1 correct orientation for installation. **The alignment features need to be properly aligned for proper operation.**
- WARNING*: DO NOT force the connectors together with the pins improperly aligned*. This will cause connection problems.

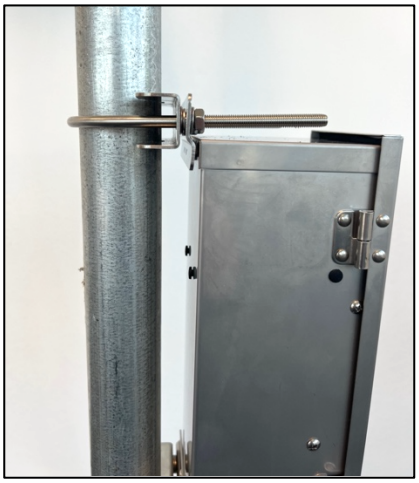


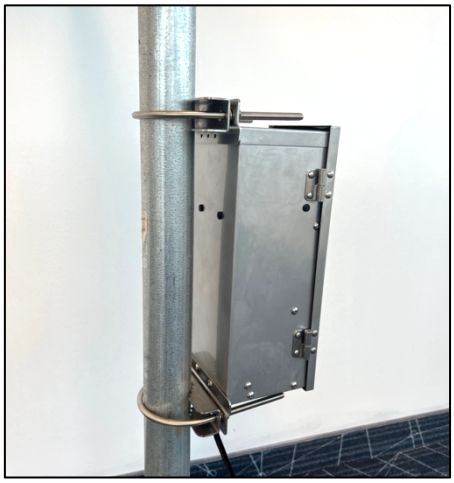
- **For two panel assembly**, Install the Y-Cable (I), using the double end to connect both solar panels. The single end will connect to the battery. If necessary, use the straight extension cable.

- Connect 10 foot cable (J) to solar panel cable. Make sure cable is long enough for connection to battery box. If distance is longer, you will need to purchase more 10 foot cables
- Using the wrench tool provided or your own with 16 mm socket, double-check that all T-Bolts (H) and bracket bolts are tight.
- Confirm that the mounting hardware is tight.
- Ensure that the cables are secured using zip-ties or similar means. Ensure that all cables have some slack, and that none are under tension.
- Be sure waterproof connectors are hanging in downward direction so water cannot get into connector plugs

BATTERY BOX MOUNT:

- Mount battery box no lower than two feet from the ground
- Connect upper “U” bolt and tighten as shown in picture below. Remember to use teeth bracket for scorning into pole
- Once secure, attach bottom of battery box in same manner



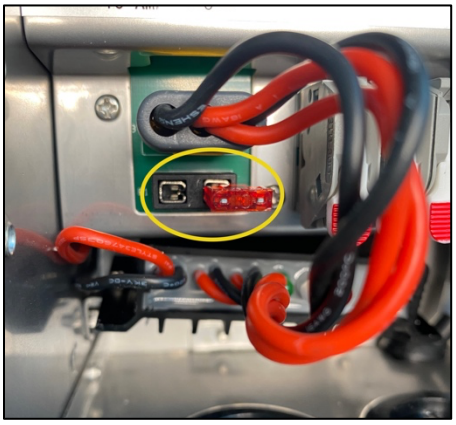


CONNECT SOLAR PANELS TO BATTERY BOX:

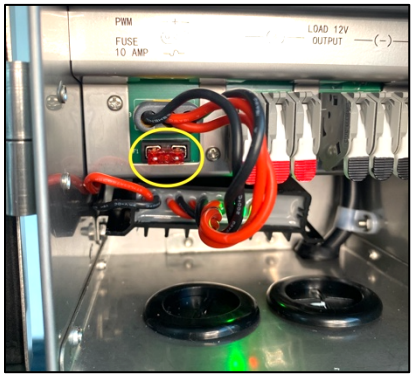
- Carefully connect battery box to solar panel cord with pins aligned. Use zip ties to secure excess wire if needed

POWERING UP YOUR BATTERY:

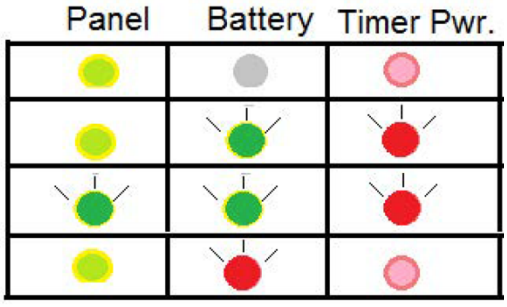
- Your battery is not operational until the fuse is properly installed so there is no discharge while in transit and storage
- Locate fuse located under timer (note this is only connected to one plug outlet)



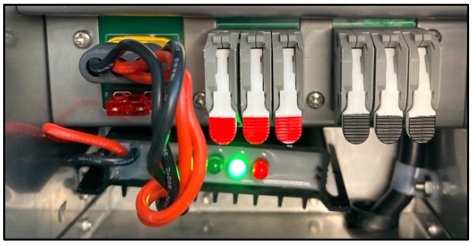
- Pull out fuse and reconnect into both plugs (make sure connection is secure)



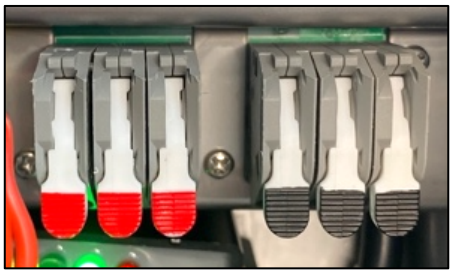
- Light will indicate proper connection and battery is now operational
    - LED status box



    - Fuse removed nonoperational
    - Solar panel off battery operating with timer
    - Solar panel, battery, timer all on
    - Blinking low battery



- Connect your low voltage wire using quick connects for your operational needs. Be sure to connect one wire to **RED** (+) and the other **Black** (-)



SETTING YOUR TIMER:

- Press center button to desired setting ON/AUTO (dusk to dawn)/2/4/6/8 hour operation

- Close door and lock for secure fit

Congratulations… your RUPS is now fully operational so Let's ***Get ON with it!***