# REMOTE OPEN/CLOSE SYSTEM

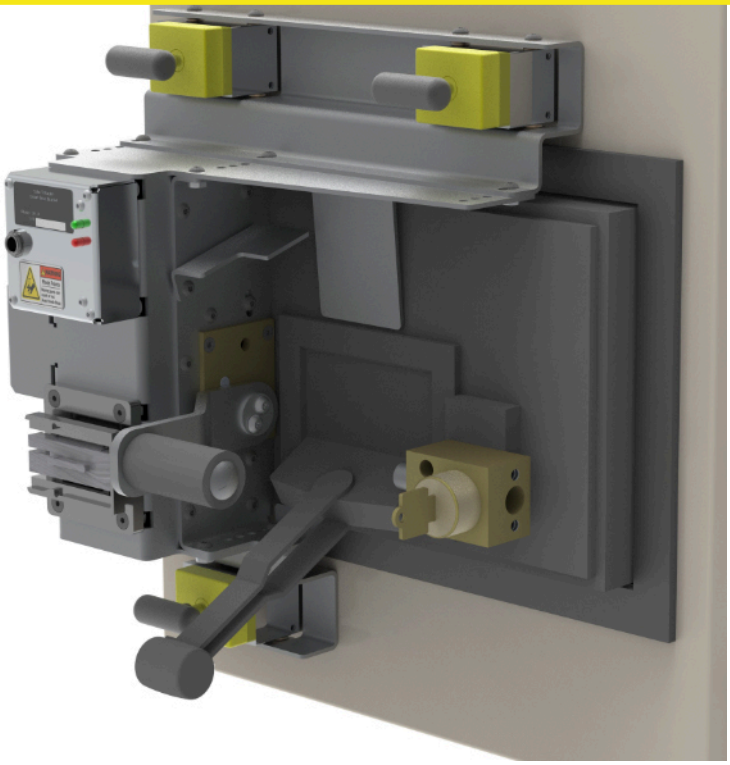
## SPECIFICALLY DESIGNED FOR:

**BREAKER:** R-Frame ROC
**MANUFACTURER:** Square D
**VOLTAGE:** 480V
**CURRENT:** 1600A-3000A

# SAFE-T-RACK
by Remote Solutions LLC

Because Distance is the Best Arc Flash Protection

## R-FRAME ROC
180



- LIGHTWEIGHT AND PORTABLE
- EASY-TO-USE HANDHELD CONTROLLER
- STANDARD 50' CABLE (WITH OPTIONAL EXTENSIONS) ASSURES SAFE DISTANCE FROM BREAKER DURING RACKING SEQUENCE
- ERROR RECOVERY & EMERGENCY STOP CAPABILITY
- CUSTOM SMART DRIVE BRACKET
- NO-MOD DESIGN MEANS NO PERMANENT ALTERATIONS TO EQUIPMENT

## PARTS & ACCESSORIES

Remote Open/Close Device,
2 Batteries and Chargers, Handheld Controller,
and Communications Cord


All of our products are designed, built to spec, and shipped from our state-of-the-art facility in Tucson, Arizona. Each product is created and tested by our knowledgeable team of designers and engineers to fit each individual breaker, cubical door, switchgear, or variant. When you choose Safe-T-Rack, you're getting the safest, most reliable product on the market.

**OUR TEAM GOES TO WORK EVERY DAY TO MAKE SURE YOUR TEAM COMES HOME SAFE.**


**REMOTE SOLUTIONS, LLC**
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www.safe-t-rack.com/Patent/

MADE IN THE USA

# R-FRAME ROC 180
# OPERATION MANUAL

**BREAKER:** Advac
**MANUFACTURER:** ABB
**VOLTAGE:** 38kV
**CURRENT:** 1200A, 3000A

## SAFETY FIRST

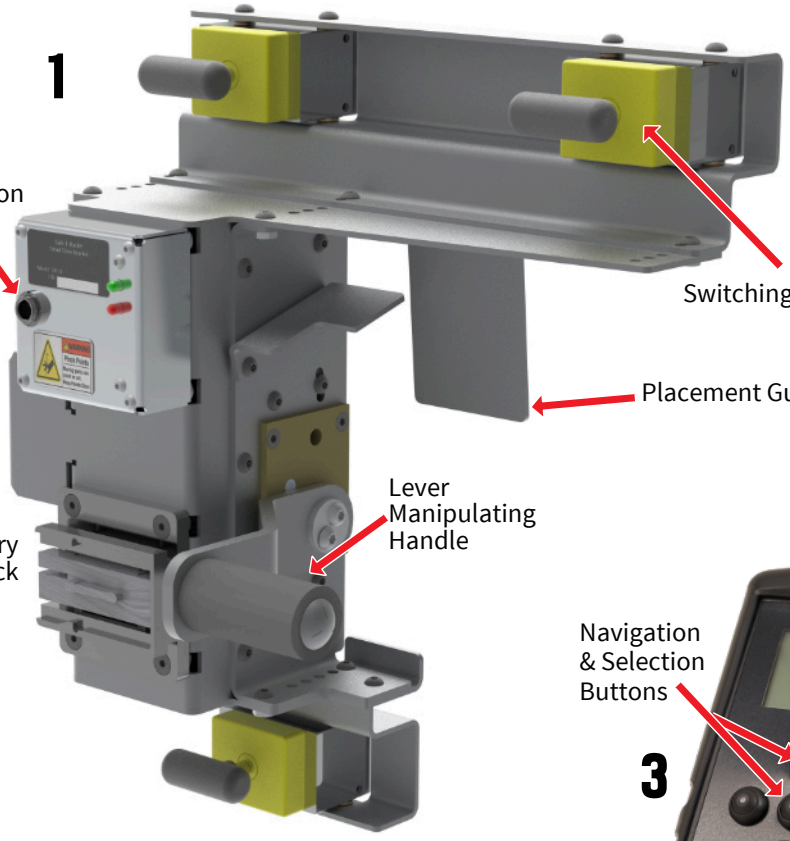
Always observe safety precautions and use personal protective equipment (PPE) as required by local site procedures. This equipment is designed to further minimize exposure risk to the operator.

## PARTS LIST

1. Remote Open/Close Device (ROC)
2. Two (2) batteries with charger
3. One (1) SR-U Handheld Controller (HHC)
4. 50’ communication cable*
5. Polymer Storage Case


2

1




## NO-MOD DESIGN

This design uses switching magnets to attach Smart Drive Bracket (SDB) to cubicle, requiring no permanent alterations to breakers or equipment!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5


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**WARNING**

This product can expose you to chemicals including Di(2-ethylhexyl), phthalate (DEHP), which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.

# SETUP SEQUENCE

## REMOTE OPEN/CLOSE DEVICE (ROC)

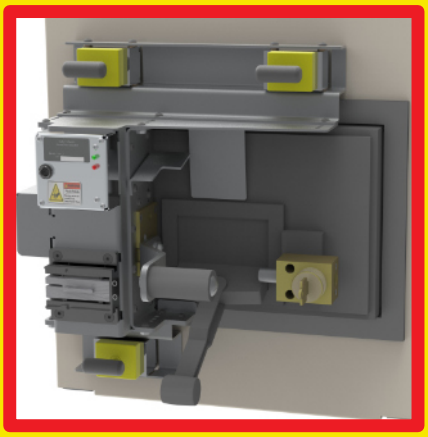
1. Place ROC against cubicle so that placement guide rests on breaker boss shelf above handle.
2. Secure ROC to breaker using switching magnets. Ensure all 3 switching magnets are engaged before proceeding.
3. Flip handle of breaker out of the way of ROC. Breaker handle should have no contact with ROC at this time.
4. Attach fully charged battery to ROC.

## HANDHELD CONTROLLER (HHC)

1. Connect 50’ Communication Cable to ROC port. *Note: Red line on Communication Cable indicates correct alignment with port.*
2. Connect other end of 50’ Communication Cable to Handheld Controller (HHC)*.

# POWER ON

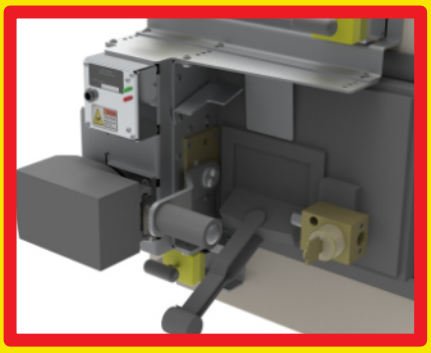
1. Twist the E-Stop switch on HHC to activate the system.
2. Several screens will flash as unit powers up. Once HHC has powered up, **verify correct application screen is displayed.**
3. Screen will request confirmation of ROC position. Navigate to desired action (Open to Close, Close to Open) using perimeter buttons on HHC (backlit in green). “Up” and “Down” will toggle through options on screen. Press center button to initiate setup sequence.
4. ROC will automatically shift manipulating handle into correct position to perform desired action.
5. Once ROC is correctly positioned, flip handle of ROC over Manipulating Handle so that it is in path of ROC.
6. Move a safe distance from breaker before proceeding.



ROC ALIGNED WITH BREAKER BOSS SHELF AND SECURED USING LOCKING MAGNETS.

ROC WITH BATTERY ON BATTERY BLOCK AND BREAKER HANDLE MOVED OUT OF THE PATH OF MANIPULATING LEVER

INCORRECT POSITION OF ROC HANDLE BEFORE MANIPULATING ARM ADJUSTS TO CORRECT PLACEMENT TO PERFORM OPEN/CLOSE FUNCTION



ROC AFTER SUCCESSFUL OPERATION, WITH LEVER SUCCESSFULLY MOVED TO CLOSED POSITION

*Note: Multiple cables can be used to increase safe distance from breaker. Additional cables sold separately. Contact Remote Solutions LLC for more information.

## SYSTEM OPERATION

1. When safe distance from breaker is achieved, select center button (backlit in red) to confirm action. **This will initiate the remote open/close process.**
2. System will perform action as selected, displaying progress on screen.
3. Upon successful operation, HHC will display a completed racking screen.

## BATTERY REQUIREMENT

Note: System will ask to verify battery level. Check battery level is at 4 bars before attempting to rack. If racking multiple breakers, please verify battery level between each racking attempt.

## POWER DOWN & STORAGE

1. Power down the unit by pressing the E-Stop button. Remove battery from ROC.
2. Unplug power cord and HHC communication cord from SDB.
3. Stow 50’ Communication Cable, HHC, and battery in storage case.
4. Remove SDB from cubicle by releasing switching magnets. Store in provided polymer case.


## CARE & MAINTENANCE

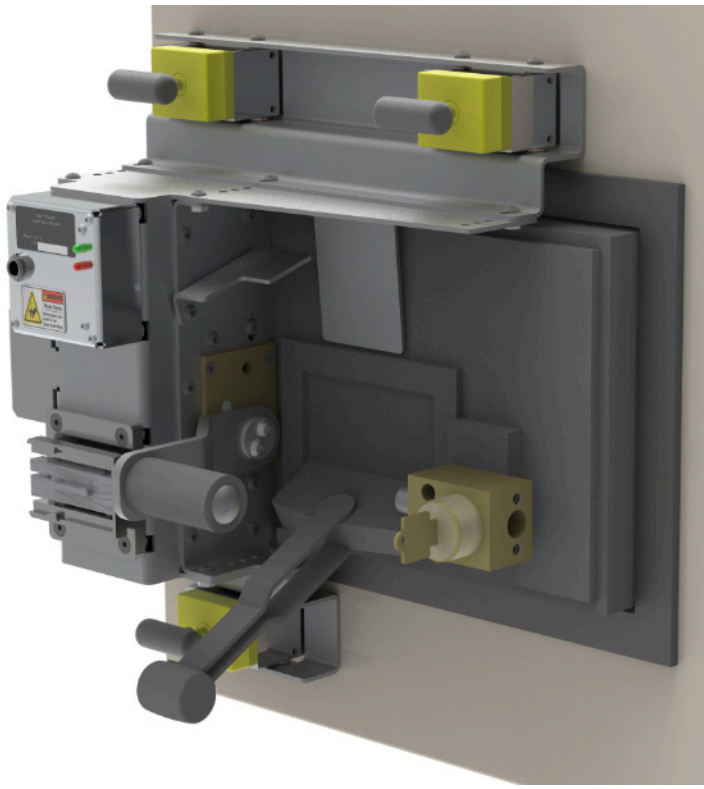
To ensure longevity of the Portable Kit and SDB, store the tools in the provided polymer case in a dry, temperate environment. The tools are weather resistant but should be used with care in rain and snow.

# ERROR RECOVERY

If a problem occurs, programmed recoveries will happen automatically and the system will attempt to recover the breaker to a known position.

When racking in/out, if an obstruction or mechanism failure occurs, the system will attempt to recover the breaker to a safe position. Actions will be displayed on HHC with an asterisk (*) in front of them. When the HHC has completed recovery operations, HHC will display current expected location of the breaker. Note the expected location and approach the breaker with caution. Determine cause of the failure and remedy the situation prior to attempting additional remote racking.

NOTE: Attempting to stop or shutting down the system mid-process once it has started is not recommended, as this will leave the breaker in an unknown position. The Remote Racking System will only operate from known positions.



# EMERGENCY STOP

The red E-Stop button on the HHC serves as both the power and Emergency Stop button. If an E-stop is initiated, the system will shut down. Operator must then manually recover the breaker to a known position. Follow all safety procedures and wear appropriate PPE when recovering a breaker manually.

For any questions, concerns, information, or missing/ replacement parts, contact Remote Solutions below or follow the QR link to our website.

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