

## BF-Series (Mini Electric Screwdrivers BF035 & BF045) Operation Instructions

Rev 1.2 (4/13/17)  
for V3 Models Only



RoHS

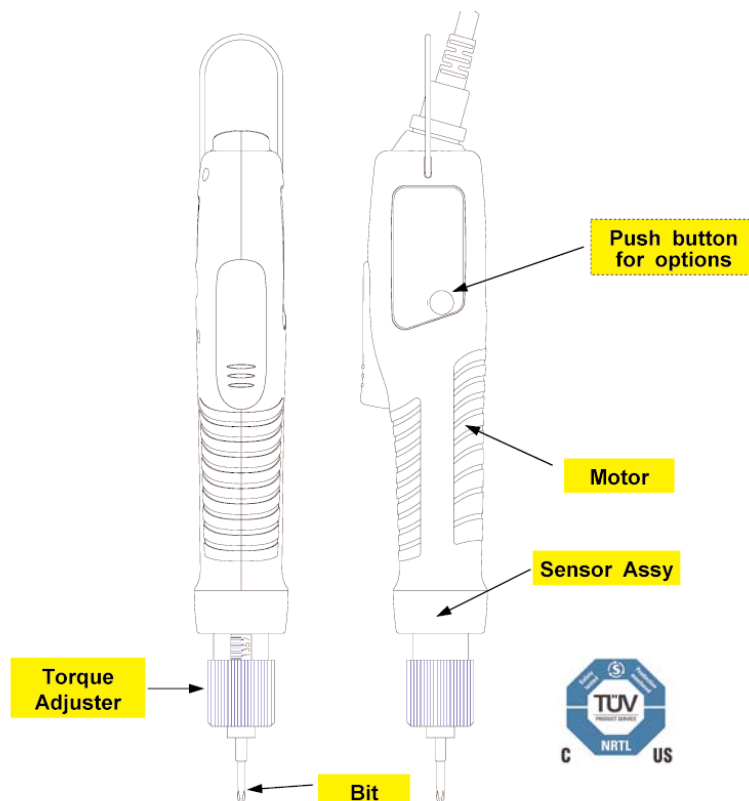
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## BF-Series (Mini Electric Screwdrivers BF035 & BF045) Operation Instructions

### Introduction

- Various models that range from 0.17 - 3.9 lbf.in
- High performance brushless motor design provides durability and reduces the standard maintenance costs for electric screwdrivers.
- Designed for high production environments. Minimal heat build-up even when tool is operated continuously.
- Over Heat Protection (OHP) and Over Current Protection (OCP) protect driver from damage or malfunction. Features a LED display that signals the tool status for the operator to view.
- Can be connected with the Scout Screw Counter.
- External torque adjustment scale.
- Requires transformer (power supply).
- All models are ESD designed and prevent the occurrence of electrostatic discharge, which improves production yields, manufacturing costs, product quality, product reliability, reputation and profitability.
- Precision "Soft-Stop" clutch prevents shock to sensitive assemblies like disk drives, plastics, electronics, etc.



## BF-Series (Mini Electric Screwdrivers BF035 & BF045) Operation Instructions

### General Operation for BF-Series models

1. Attach cord to the BF screwdriver. Make sure notch in plug lines up with the notch on the socket. Tighten knurled ground ring.
2. Plug in transformer and check power indicator. If it is not on, check fuse in the transformer.
3. Attach cord to the transformer (Transformer required to operate the tool). Make sure notch in plug lines up with the notch on the socket. Tighten knurled ground ring.
4. Select a bit. Retract the bit collar. Insert the bit and release the retracted collar. To avoid damaging fasteners, make sure the proper bit is suitable for the head of the fastener.
5. The torque limit is determined by the tension of the coil spring housed in the torque adjustment nut. The tighter the coil spring is wound the higher the torque limit is raised. See Charts on page 7 to determine the appropriate torque adjustment setting.
6. Rotate the torque adjustment nut to set the torque limit. Turn clockwise to increase torque and counter clockwise to decrease torque. The scale adjacent to the Torque Adjustment Nut is a reference guide. The torque output from the driver can change depending on various fastening factors like friction, type of joint, and the type material being used like a washer.
7. Turn driver on and check for proper rotation. FOR-clockwise, REV-counterclockwise.
8. To apply torque, squeeze the lever. The driver will automatically stop when the preset torque has been reached.
9. To remove the screw, turn the FOR/REV switch to REV.



### Over Heat Protection (OHP) and Over Current Protection (OCP) Settings.

The BF drivers offer Over Heat Protection (OHP) and Over Current Protection (OCP) to protect the driver from damage or malfunction. Features a LED display that signals the tool status for the operator. It's located on the side. Below is the LED display indicator for reference.

### Self Protection and LED display sign

no	Alarm	LED display sign	Reset
1	Over Voltage (over 32VDC)	● <b>GREEN</b> Intermitten light by 0.5sec	Auto reset lower than 32V
2	Overload (over 1.5A/0.5 sec)	● <b>RED</b> Intermitten light by 0.5sec	Auto reset after 5 sec.
3	Over heat (over 80°C on motor)	● <b>YELLOW</b> Intermitten light by 0.5sec	Auto reset lower than 80°C
4	Driver LOCK (by pin#6 signal)	● <b>YELLOW</b> Continuous light on	Reset by signal OFF

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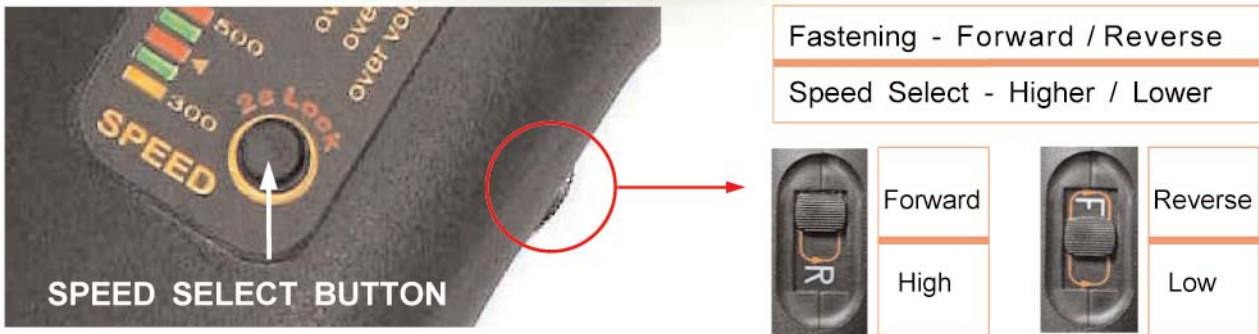
## RPM Settings

The BF035 and BF045 models feature adjustable RPM setting on the tool. The RPM are selectable in increments of 50RPMs.

Also features precision "Soft-Stop" clutch, which prevents shock to sensitive assemblies like disk drives, plastics, electronics, etc.

### Adjusting the RPM settings

- 1) Keep pressing the Lock button for 2 seconds to visit to PROGRAM mode. Then two LED lights will display the set speed.
- 2) Select "Reverse" of F/R switch for increasing speed. Or select "Forward" of F/R switch for decreasing speed.
- 3) Press "Speed" button and select the target speed. The set speed can be recognized by the colors of the LEDs.
- 4) Keep pressing the Lock button for 2 second to go back to operating (work) mode.



### Program Lock Key

The Program Lock Key protects from incidental or operator tampering of the programmable settings on the side of select BF-Series models\* (V3 models only). To adjust the settings the Program Lock Key must be plugged into the STC40 or FT-30D Mini Transformer.

**Note!** The Program Key **cannot** be used with BF-Series Standard Plus Models, Soft Stop Plus Models & Angle & Auto Reverse Models.



To adjust the settings the Program Lock Key must be plugged into the STC40 or FT-30D Mini Transformer.

## Speed Control

Model	F045								F035								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Button	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RPM	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
LED	Y	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	Y

## BF-Series (Mini Electric Screwdrivers BF035 & BF045) Operation Instructions

### STC40 Transformer

STC40 transformer is power supply designed for operating the BF-Series & NF-Series brushless electric screwdrivers. Only use this transformer when operating any BF-Series & NF-Series models.

#### Features

- Over Heat Protection (OHP) and Over Current Protection (OCP) protect driver from damage or malfunction.
- Temperature Detection powers down the unit and resets automatically when unit restores to acceptable levels.
- Switchable 110V & 230V input voltage. Unit will reset itself if motor/current overload is too high.
- Start & Stop Signal Output (for PLC).
- Screwdriver Lock Signal Input (for PLC).
- Unit can be connected to the Scout (Screw Counter).



**Model:** STC40  
**Item #** 145754  
**Specifications:**  
 Rated Output: 2.6A 105W  
 Max. Output: 10A  
 Output VDC: 30/40V  
 Input VAC: 110/230V  
 Size inches (W x D x H): 4 3/8" x 7 1/2" x 2 3/8"  
 Weight: 1.8 lbs.  
**Operates with: BF-Series and NF-Series**

### FT-30D Mini Transformer

The FT-30D Mini Transformer is power supply designed for operating only the Mini BF-Series brushless electric screwdrivers.

#### Features

- Over Heat Protection (OHP) and Over Current Protection (OCP) protect driver from damage or malfunction.
- Temperature Detection powers down the unit and resets automatically when unit restores to acceptable levels.
- Switching power supply 110V - 230V input voltage. Unit will reset itself if motor/current overload is too high.
- Unit can be connected to the Scout (Screw Counter).



**Model:** FT-30D  
**Item #** 145870  
**Specifications:**  
 Rated Output: 1.2A  
 Output VDC: 30V  
 Input VAC: 110 ~ 230V  
 Size inches (W x D x H): 2 3/4" x 5 1/8" x 1 1/2"  
 Weight: 8.8 oz.  
**Operates only: BF035 & BF045**

### Program Lock Key - Item # 145774

The Program Lock Key protects from incidental or operator tampering of the programmable settings on the side of select BF-Series models\* (V3 models only). To adjust the settings the Program Lock Key must be plugged into the STC40 or FT-30D Mini Transformer.

**\* Note! The Program Key is required for the BF-Series Mini models, Standard Models and Soft Stop Models. RPM & Soft Start Settings cannot be adjusted without it.**

**The Program Key cannot be used with BF-Series Standard Plus Models, Soft Stop Plus Models & Angle & Auto Reverse Models.**





## BF-Series (Mini Electric Screwdrivers BF035 & BF045) Operation Instructions

### Accessories

The EZ-Glider torque arms are designed to improve production and quality control during the assembly process. The arms securely keep electric or pneumatic drivers in perpendicular alignment to help prevent side loading or cross threading occurring during the assembly process. The EZ-Glider helps remove the operator's influence in the assembly process and strengthens quality control.

The ergonomic design of the EZ-Glider torque arms reduces RMI (repetitive motion injury) and CTS (carpal tunnel syndrome). The effortless handling of the torque arm provides comfortable tool operation and increased production. The torque arm can be installed in space-restricted areas.



### Torque Cover

(BF035 & BF045 models only)

#### Item # 145773

Protects from incidental or operator tampering of torque setting.



### Vacuum Adapter Kit

For: BF035 & BF045 models

#### Item # 145653



Vacuum adapter kits can be mounted on an electric screwdriver. The screwdriver is fitted with a suction head that holds the screw on the bit, enabling the operator to pick it up with the tool itself. This is an effective, time saving device that works with most fasteners.

- Accepts different size screws and various length fasteners.
- Allows quick-change set-up at a low cost.
- Mounts with threaded torque nut. The driver remains externally adjustable while allowing semi-automatic pickup of non-ferrous fasteners.
- Plug driver into vacuum supply or chose the Vacuum Ejector.
- Mouthpiece and bit purchased separately.



### Screw Counter

Scout screw counter helps manufacturers detect and eliminate costly screw-fastening errors during the assembly process. Using a screw counter is like putting the eyes and ears of a quality control manager where they are needed most - right on the assembly area. The Scout is designed to detect cross threading, omissions, unfinished rundowns and cycle complete. The screw counter takes the control of the assembly process out of the operator's hands.

#### Item # 145790

Screw presenters are small, tabletop devices used to organize and automate work areas and production cells. Screw presenters make assemblers and the assembly process more efficient by mechanically presenting a screw to a fixed pick up point. The inexpensive screw presenter is an alternative tool instead of the cumbersome and very expensive screwfeeder systems.



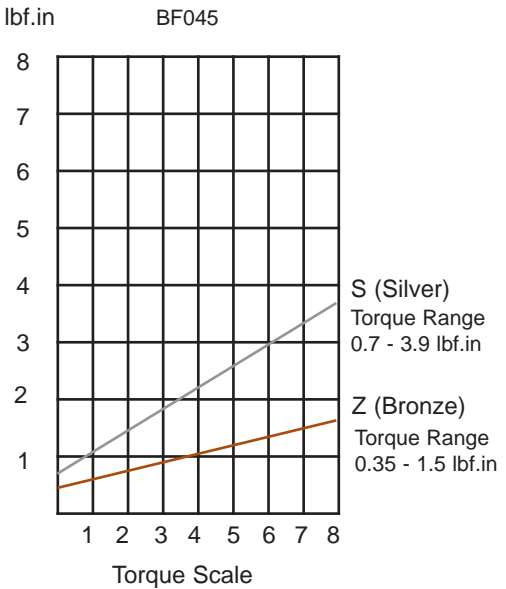
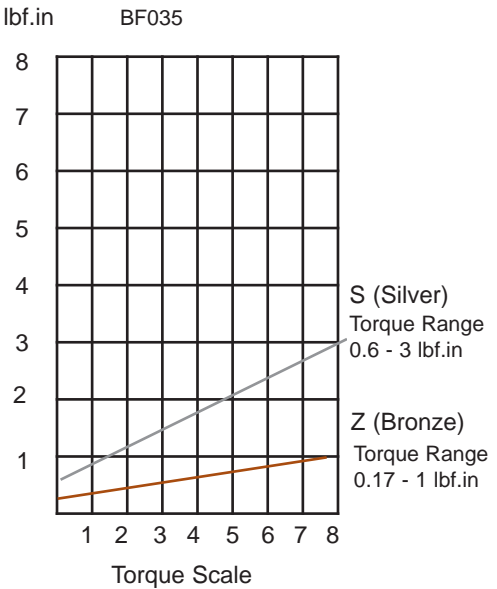
# BF-Series (Mini Electric Screwdrivers BF035 & BF045) Operation Instructions

### Torque Charts

These charts are meant to be used as guidelines for setting the torque on the BF-Series electric screwdrivers. The drivers have a torque scale on the torque adjustment nut showing reference numbers. These numbers determine the approximate torque setting. Refer to the charts to determine the reference number setting for your torque requirement.

#### How to Read the Torque Charts

Torque ranges (lbf.in) approximate tightening torque. Figures below each chart indicate scale setting on the tool. Some drivers have more than one spring. Select the appropriate spring to achieve the desired torque setting.





## BF-Series (Mini Electric Screwdrivers BF035 & BF045) Operation Instructions

### Testing Power Tools:

1. Application Method: Use a torque analyzer in "Peak Mode" with a rotary transducer between the power tool and the actual application. This is the best way to test since you are using the actual joint as the test station. You will see the actual torque applied to the fastener. **Caution:** Variances in tool performance may occur do to the addition of the rotary transducer.
2. Simulated Method: Always use a quality joint rate simulator (run down adapter) with a torque analyzer when testing power tools in a simulated application. Use Joint rate and Breakaway methods to obtain most accurate torque readings in a simulated rundown.

### Care

1. The BF-Series screwdrivers are a precision torque control instrument and should be handled with care at all times.
2. Only use the transformers listed in the Mountz catalog or website for appropriate BF-Series driver model (If you have any questions regarding the appropriate transformer set-up, contact Mountz Customer Service Department).
3. Operate under safe conditions. Do not place in operation where such objects as hair, strings, clothing, etc. can become tangled in the rotating bit.
4. Keep away from moisture. Never use in high humid, moist or damp environment.

### Service

Mountz Inc. features an experienced calibration and repair staff. Our trained technicians can calibrate and repair most any tool. Mountz provides rapid service with quality that you can trust as we offer two state-of-the-art calibration lab and repair facilities that can calibrate up to 20,000 lbf.ft.

Since 1965, Mountz's in-depth knowledge of torque is reflected in our tool's craftsmanship and our ability to provide solutions to both common and uncommon torque applications. We perform calibrations in accordance with ANSI/NCSL-Z540. Mountz is dedicated solely to the manufacturing, marketing and servicing of high quality torque tools.

### Tool Service & Repair Capability

Torque Wrenches: Click, Dial, Beam, Cam-Over & Break-Over

Torque Screwdrivers: Dial, Micrometer, Preset & Adjustable

Torque Analyzers/Sensors: All brands

Electric Screwdrivers: All brands

Air Tools: All brands

Impact Wrenches, Drills, Pulse Tools, Grinders, Percussive Tools,  
Air Screwdrivers, Nutrunners, DC Controlled Nutrunners

Torque Multipliers: All brands

### Mountz Service Locations

#### *Eastern Service Center*

19051 Underwood Rd.

Foley, AL 36535

Phone: (251) 943-4125

Fax: (251) 943-4979

#### *Western Service Center*

1080 N.11th Street

San Jose, CA 95112

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