

# **FREEDOM**

## **18V Cordless Rotary Tool**

**MODEL FT1004**

**INSTRUCTION MANUAL**

**■ IMPORTANT:** Please read this manual carefully before using your tool. Keep it in a safe place for future reference. Failure to follow instructions may result in serious injury.

## FREEDOM 18V CORDLESS ROTARY TOOL

Thank you for choosing Freedom Tools!

Please read this manual carefully before using your new rotary tool. Keep it handy for future reference.

### WHAT'S IN THE BOX

- Freedom 18V Cordless Rotary Tool (FT1004)
- 3 Collets (for different accessory shaft sizes)
- Sanding Rubber (for sanding bands)
- Cutting Wheel
- Grinding Stone
- Sanding Paper
- Wool Polishing Wheel
- Sanding Roll
- Cutting Wheel Fixture
- Screw Mandrel
- Drill Bits
- Grinder Bits
- Diamond Bits
- Spanner Wrench
- Instruction Manual

**NOTE:** Battery pack and charger are sold separately.

### INTENDED USE

Your Freedom Cordless Rotary Tool is designed for

#### CUTTING:

- Cutting metal, plastic, and wood
- Cutting-off operations with abrasive wheels
- Precision cutting in tight spaces

#### GRINDING AND SHAPING:

- Grinding metal and other materials
- Shaping wood, fiberglass, and plastic
- Deburring edges
- Rust removal

## SANDING:

- Detail sanding in tight spaces
- Smoothing wood and metal surfaces
- Removing paint and finishes
- Preparing surfaces for finishing

## POLISHING:

- Polishing metal and plastic
- Buffing to a high shine
- Cleaning and restoring surfaces

## DRILLING:

- Drilling small holes in wood, plastic, and soft metals
- Detail work and craft projects

## WIRE BRUSHING:

- Cleaning metal surfaces
- Removing rust and corrosion
- Preparing surfaces for painting

## This tool is NOT intended for

- Heavy-duty grinding or cutting
- Use with liquid coolants
- Outdoor use in wet conditions
- Any use not described in this manual

## TECHNICAL SPECIFICATIONS

Model Number: FT1004

Voltage: 18V DC

Battery Type: Lithium-Ion

No-Load Speed: Up to 25,000 RPM

Variable Speed Range: 2,000 - 18,000 RPM (adjustable)

Collet Sizes: 3 sizes included

Charging Time: 3-5 hours

Weight: Approximately 2.8 lbs (with battery)

## KNOW YOUR ROTARY TOOL - PARTS IDENTIFICATION

1. Chuck (collet holder)

2. Spindle
3. Spindle Lock Button
4. Variable Speed Controller Dial
5. ON/OFF Switch (I = On, O = Off)
6. Soft Grip Handle
7. Battery Pack (18V Li-Ion)
8. Battery Release Buttons
9. Battery Level Indicator
10. Motor Ventilation Slots
11. Chuck Nut (for securing collets)
12. Collets (3 sizes for different accessory shafts)

## IMPORTANT SAFETY INFORMATION

**■ WARNING: Failure to follow these safety instructions may result in electric shock, fire, serious injury, or death.**

SAVE THESE INSTRUCTIONS - Keep this manual in a safe place for future reference.

### GENERAL POWER TOOL SAFETY

#### WORK AREA SAFETY

- Keep your work area clean and well-lit. Cluttered or dark areas increase the risk of accidents.
  - DO NOT operate power tools near flammable liquids, gases, or dust. Power tools create sparks that can ignite fumes or dust.
  - Keep children and bystanders at least 10 feet away while operating this tool.

#### ELECTRICAL SAFETY

- Keep the charger away from rain and moisture.
- Never use the charger if the cord or plug is damaged.
- Keep the charging cord away from heat, oil, sharp edges, and moving parts.
- If you must use an extension cord with the charger, use only cords rated for outdoor use.

#### PERSONAL SAFETY

- Stay alert. Don't use power tools when you're tired or under the influence of drugs, alcohol, or medication.
  - Always wear safety glasses or goggles. Also wear a dust mask, hearing protection, and gloves when appropriate.
  - Prevent accidental starting. Make sure the switch is OFF before inserting the battery.
  - Remove adjustment tools before turning on the rotary tool. A wrench left on

a rotating part can cause injury.

- Don't overreach. Keep proper footing and balance at all times.
- Dress appropriately. Don't wear loose clothing or jewelry. Keep long hair tied back. Loose items can get caught in moving parts.
- Secure your workpiece with clamps or a vise. Never hold material by hand while working.

## TOOL USE AND CARE

• Use the right tool for the job. Don't force a tool to do something it wasn't designed for.

- Don't use the rotary tool if the switch doesn't turn it on and off properly.

A tool that can't be controlled is dangerous and must be repaired.

• Remove the battery before making adjustments, changing accessories, or storing the tool.

• Store the tool out of reach of children. Never let anyone unfamiliar with power tools or these instructions operate this rotary tool.

• Maintain your tools. Check for damaged parts and any other condition that might affect operation. Have damaged tools repaired before use.

• Keep accessories sharp and clean. Sharp accessories are safer and more efficient.

• Use only accessories recommended for this tool. Using the wrong accessories can be dangerous.

## BATTERY SAFETY

• Only use the Freedom charger that came with this tool. Using the wrong charger can cause fires.

- Only use Freedom 18V battery packs with this tool.

• When the battery is not in the tool, keep it away from metal objects like paper clips, coins, keys, nails, and screws. These can short-circuit the battery terminals and cause burns or fire.

• Under extreme conditions, battery liquid may leak. If it touches your skin, wash immediately with soap and water. If it gets in your eyes, flush with water for 15 minutes and seek medical attention immediately.

## ROTARY TOOL-SPECIFIC SAFETY

■ **HOLD THE TOOL BY THE INSULATED GRIP AREAS** when working where you might hit hidden wiring. Contact with a live wire can electrify exposed metal parts and shock the operator.

■ **ALWAYS WEAR SAFETY GLASSES OR GOGGLES.** Flying debris from grinding, cutting, and sanding can cause serious eye injury.

■ **WEAR A DUST MASK** when sanding, grinding, or cutting. Wood dust, metal particles, and other debris can be harmful if inhaled.

- **ACCESSORIES MUST MATCH THE TOOL'S RATED SPEED.** Using accessories rated for lower speeds can cause them to break and fly apart.
- **NEVER USE DAMAGED ACCESSORIES.** Inspect all accessories before use. Cracked, chipped, or damaged accessories can break during operation.
- **ALLOW ACCESSORIES TO REACH FULL SPEED** before contacting the workpiece. This prevents kickback and damage.
- **NEVER PUT THE TOOL DOWN** until the accessory has completely stopped spinning.
- **KICKBACK WARNING:** A pinched, snagged, or bound accessory can cause the tool to be thrown backward toward the operator. Maintain a firm grip at all times.
- **DO NOT GRIND WITH THE SIDE OF A CUT-OFF WHEEL.** Cut-off wheels are designed for edge cutting only. Side pressure can cause the wheel to break.
- **NEVER USE OVERSIZED ACCESSORIES.** Accessories must not exceed the maximum size specified for this tool.
- **NEVER PRESS THE SPINDLE LOCK** while the tool is running. This can damage the tool and cause injury.
- **WIRE BRUSHES THROW BRISTLES.** Wear protective clothing and face shield when using wire brushes. Bristles can become embedded in skin.
- **DO NOT USE LIQUID COOLANTS** with this tool. Liquids can damage the motor and cause electric shock.
- **KEEP HANDS AWAY** from spinning accessories at all times. Even at low speeds, rotating accessories can cause serious cuts.

## DUST HAZARD WARNING

- Some dust created by sanding, sawing, grinding, and drilling contains chemicals known to cause cancer, birth defects, and reproductive harm.

## Examples include

- Lead from lead-based paints
- Crystalline silica from bricks, cement, and masonry
- Arsenic and chromium from pressure-treated lumber
- Wood dust from hardwoods and softwoods

## To reduce exposure

- Work in a well-ventilated area
- Use a dust collection system when possible
- Wear an approved respirator or dust mask
- Don't eat, drink, or smoke in the work area
- Wash hands and face thoroughly after use

## BATTERY AND CHARGER SAFETY

### BATTERY WARNINGS

- DO NOT disassemble, open, crush, bend, puncture, or shred the battery.
- DO NOT expose to fire, excessive heat, or microwave ovens.
- DO NOT immerse in water or other liquids.
- DO NOT short-circuit the battery terminals.
- DO NOT modify or attempt to repair the battery.
- Dispose of used batteries according to local regulations.
- Supervise children around batteries and tools.
- Use only with Freedom chargers and tools.

### BATTERY CARE

- Keep batteries away from metal objects when not in use (paper clips, coins, keys, nails, screws, etc.). These can short the terminals and cause burns or fire.
- DO NOT PUT BATTERIES IN FIRE OR EXPOSE TO HIGH HEAT - they may explode.
- Store batteries below 50°C (122°F).
- Battery liquid is corrosive. If it contacts skin, wash immediately with soap and water. If it contacts eyes, flush with water for 15 minutes and seek medical attention.

### CHARGER SAFETY

- Read all instructions before using the charger.
- DO NOT expose charger to rain or snow.
- Pull by the plug, not the cord, when disconnecting.
- Keep the cord away from foot traffic and heat sources.
- Use an extension cord only if absolutely necessary.
- Use only the supplied Freedom charger.
- Charge only one battery at a time.
- DO NOT attempt to open the charger.
- DO NOT incinerate batteries - they can explode.
- DO NOT charge in explosive atmospheres.

## UNDERSTANDING RISKS

**Even when used properly, some risks cannot be eliminated**

1. Lung damage if you don't wear an effective dust mask
2. Hearing damage if you don't wear hearing protection
3. Health problems from vibration if the tool is used for extended periods

without breaks

4. Eye injury from flying debris if you don't wear safety glasses
5. Cuts and abrasions from contact with spinning accessories

**■ ELECTROMAGNETIC FIELD WARNING: This tool produces an electromagnetic field during operation. If you have a pacemaker or other medical implant, consult your doctor and the implant manufacturer before using this tool.**

## GETTING STARTED

### CHARGING THE BATTERY (FIRST TIME USE)

**Before using your rotary tool for the first time, fully charge the battery**

1. Insert the battery pack into the charger stand. Make sure the + and - terminals align correctly.
2. Plug the charger into a standard wall outlet (100-240V AC).
3. The indicator light will turn RED, showing the battery is charging.
4. When fully charged (3-5 hours), the indicator light will turn GREEN.
5. Unplug the charger from the wall outlet.
6. Remove the battery from the charger.

### IMPORTANT CHARGING NOTES:

- The battery reaches full capacity after 3-5 charge/discharge cycles.
- The charger, adapter, and battery will feel warm during charging - this is normal.
  - Always unplug the charger from the wall BEFORE disconnecting the battery (fire hazard prevention).

### BATTERY MAINTENANCE:

- Recharge when you notice reduced performance. Don't continue using a weak battery.
  - Recharge at least every 6 months, even if not in use.
  - DON'T overcharge. Remove the battery after 5 hours maximum.
  - DON'T recharge immediately after charging. Let the battery rest for at least 15 minutes.
    - If storing the tool for a long time, recharge the battery before use.
    - If charging multiple batteries, wait at least 15 minutes between charges.
    - NEVER leave a charging battery unattended.

### INSTALLING THE BATTERY

1. Align the battery pack with the battery slot on the tool handle.
2. Slide the battery in until it clicks into place.

3. To remove: Press both battery release buttons and pull the battery out.

## COLLETS AND ACCESSORIES

### UNDERSTANDING COLLETS

Your Freedom Rotary Tool comes with 3 different collet sizes. Collets are the metal sleeves that hold accessories in place. Each collet is designed for a specific accessory shaft diameter.

**IMPORTANT:** Always use the correct collet size for your accessory. Never force a larger shaft into a smaller collet - this can damage both the collet and the tool.

### CHANGING COLLETS

■ **ALWAYS REMOVE THE BATTERY before changing collets or accessories!**

1. Remove the battery from the tool.
2. Press and hold the spindle lock button.
3. While holding the spindle lock, use the spanner wrench to loosen the chuck nut by turning it counterclockwise.
4. Remove the chuck nut completely.
5. Remove the old collet from the spindle.
6. Select the correct size collet for your accessory.
7. Insert the new collet into the spindle.
8. Thread the chuck nut back onto the spindle (hand-tight only for now).
9. Insert your accessory to verify the collet size is correct.
10. Remove the accessory, then proceed to install it properly (see below).

■ **NEVER press the spindle lock button while the tool is running. This will damage the tool.**

## INSTALLING ACCESSORIES

■ **ALWAYS REMOVE THE BATTERY before installing or removing accessories!**

■ **INSPECT ACCESSORIES before each use. Never use cracked, chipped, or damaged accessories.**

### GENERAL ACCESSORY INSTALLATION

1. Remove the battery from the tool.
2. Select the correct collet size for your accessory shaft.
3. Press and hold the spindle lock button.
4. While holding the spindle lock, loosen the chuck nut with the spanner wrench.
5. Insert the accessory shaft as far as possible into the collet (usually about 3/4" or until it stops).
6. While still holding the spindle lock, tighten the chuck nut firmly with

the spanner wrench. Don't overtighten.

7. Release the spindle lock.

8. Tug on the accessory to make sure it's secure.

## INSTALLING CUTTING WHEELS

### Cutting wheels require special installation using the cutting wheel fixture

1. Remove the battery.

2. Install the cutting wheel fixture (mandrel) into the collet as described

above.

3. Slide the cutting wheel onto the mandrel shaft.

4. Thread the screw onto the mandrel to secure the wheel.

5. Tighten the screw firmly, but DO NOT overtighten - this can crack the  
wheel.

■ **CUTTING WHEELS ARE FRAGILE. Handle with care and inspect for cracks before each use.**

## INSTALLING FELT POLISHING WHEELS

1. Thread the felt wheel directly onto the screw mandrel.

2. Tighten fully until the wheel seats against the collar.

3. Install the mandrel into the collet as described above.

## INSTALLING SANDING ROLLS

1. Insert the screw mandrel into the sanding rubber.

2. Loosen the screw to allow the rubber to relax.

3. Slide the sanding roll over the rubber.

4. Tighten the screw - this expands the rubber and secures the sanding roll.

5. Install the mandrel into the collet as described above.

## INSTALLING DRILL BITS

1. Select the correct collet size for your drill bit shaft.

2. Insert the drill bit as far as possible into the collet.

3. Tighten securely.

4. Make sure the bit is straight and secure before use.

## OPERATING YOUR ROTARY TOOL

### BEFORE EACH USE - SAFETY CHECK

- Inspect the accessory for damage, cracks, or wear
- Make sure the accessory is properly installed and secure
- Check that the battery is fully charged and locked in place

- Verify the speed setting is appropriate for the accessory
- Wear safety glasses, dust mask, hearing protection, and gloves
- Secure your workpiece with clamps

## TURNING THE TOOL ON AND OFF

### TO TURN ON:

1. Set the variable speed controller to the desired speed (start low).
2. Slide the switch forward to the "I" position.
3. The tool will start spinning at the selected speed.

### TO TURN OFF:

1. Slide the switch backward to the "O" position.
2. Wait for the accessory to come to a complete stop before setting down.

**■ NEVER put the tool down while the accessory is still spinning!**

## VARIABLE SPEED CONTROL

Your rotary tool has a variable speed dial that adjusts from approximately 2,000 to 18,000 RPM.

### SPEED SELECTION GUIDE:

#### LOW SPEEDS (2,000 - 8,000 RPM):

- Large diameter accessories
- Soft materials (plastic, soft wood)
- Polishing operations
- Wire brushing
- When you need more control

#### MEDIUM SPEEDS (8,000 - 15,000 RPM):

- General purpose work
- Sanding operations
- Grinding soft metals
- Shaping wood

#### HIGH SPEEDS (15,000 - 18,000 RPM):

- Small diameter accessories
- Hardwoods
- Hard metals (steel, iron)
- Cutting operations

- Drilling
- Fine detail work

**GENERAL RULE:** Start at a lower speed and increase as needed. Higher speeds generate more heat.

## RUNNING IN NEW ACCESSORIES

### When installing a new accessory

1. Install the accessory as described above.
2. Remove the battery and reinstall it.
3. Set the speed to maximum.
4. Turn on the tool and let it run at full speed for 1 minute WITHOUT contacting any material.
5. Stand to the side during this test run.
6. If the accessory wobbles, vibrates excessively, or makes unusual noises, turn off immediately and check the installation.

This test ensures the accessory is properly balanced and secure.

## USING YOUR ROTARY TOOL

### GRINDING

#### APPLICATIONS:

- Shaping metal and other materials
- Removing rust and corrosion
- Deburring sharp edges
- Smoothing welds
- Sharpening tools

#### TECHNIQUE:

1. Install the appropriate grinding stone.
2. Select medium to high speed (12,000-18,000 RPM).
3. Put on safety glasses, dust mask, and gloves.
4. Secure the workpiece firmly.
5. Turn on the tool and let it reach full speed.
6. Apply light to moderate pressure. Let the grinding stone do the work.
7. Keep the tool moving to avoid creating grooves or flat spots.
8. For metal grinding, work at an angle of about 15-30 degrees.
9. Take breaks to let the accessory cool.

## TIPS:

- Don't apply excessive pressure - this generates heat and wears the stone faster
  - Keep the tool moving in smooth, steady motions
  - For rust removal, start with coarse grit and finish with fine grit
  - Grinding generates sparks when working with metal - keep flammable materials away

## CUTTING

### APPLICATIONS:

- Cutting metal rods and tubing
- Cutting plastic and wood
- Cutting bolts and screws
- Detail cutting work

### TECHNIQUE:

1. Install a cutting wheel using the cutting wheel fixture.
2. Select high speed (15,000-18,000 RPM).
3. Put on safety glasses, dust mask, hearing protection, and gloves.
4. Secure the workpiece firmly with clamps.
5. Mark your cut line clearly.
6. Turn on the tool and let the wheel reach full speed.
7. Position the wheel perpendicular to the material.
8. Apply light, steady pressure. Let the wheel cut at its own pace.
9. DO NOT force the wheel or apply side pressure.
10. For thick materials, make multiple passes rather than forcing through.

#### ■ CUTTING WHEEL SAFETY:

- ONLY use the edge of the wheel - never the side
- Never use a damaged or cracked wheel
- Support the workpiece to prevent binding
- Stand to the side, not in line with the wheel
- Let the wheel reach full speed before cutting
- Don't force or twist the wheel

## CUTTING DIFFERENT MATERIALS:

### METAL:

- Use abrasive cutting wheels
- High speed

- Light pressure
- Let the wheel cool periodically
- Support both sides of the cut to prevent binding

## PLASTIC:

- Use abrasive cutting wheels
- Medium to high speed
- Very light pressure
- Cut slowly to prevent melting from friction heat

## WOOD:

- Use appropriate cutting accessories
- High speed
- Steady pressure
- Watch for kickback near knots

## SANDING

### APPLICATIONS:

- Smoothing wood and metal surfaces
- Removing paint and finishes
- Preparing surfaces for finishing
- Detail sanding in tight spaces
- Shaping and contouring

### TECHNIQUE:

1. Install the appropriate sanding accessory.
2. Select the speed based on material
  - Soft wood: 8,000-12,000 RPM
  - Hard wood: 12,000-15,000 RPM
  - Metal: 10,000-15,000 RPM
  - Plastic: 8,000-12,000 RPM
3. Put on safety glasses and dust mask.
4. Secure the workpiece with clamps.
5. Turn on the tool and let it reach speed.
6. Contact the work surface with the sanding accessory.
7. Move the tool in smooth, steady motions.
8. Don't apply excessive pressure - let the abrasive do the work.
9. Keep the tool moving to avoid creating grooves.
10. For best results, start with coarse grit and work up to fine grit.

## SANDING ACCESSORY GUIDE:

### SANDING DRUMS/ROLLS:

- Good for inside curves and contours
- Available in various grits
- Replace when worn smooth

### SANDING DISCS:

- Good for flat surfaces and outside curves
- Can reach into tight spaces
- Various grits available

### FLAP WHEELS:

- Good for contoured surfaces
- Conform to irregular shapes
- Long-lasting

### TIPS:

- Always sand with the grain on wood
- Start with coarser grit and progress to finer
- Keep the tool moving to avoid burn marks
- Change sanding accessories when they become clogged or worn
- Use dust extraction or work in a well-ventilated area

## POLISHING

### APPLICATIONS:

- Polishing metal to a high shine
- Buffing plastic surfaces
- Restoring tarnished metal
- Cleaning and brightening surfaces
- Removing fine scratches

### TECHNIQUE:

1. Install a felt polishing wheel or cloth buff.
2. Select low to medium speed (5,000-10,000 RPM).
3. Put on safety glasses.
4. Apply polishing compound to the wheel (if using).
5. Turn on the tool.
6. Gently touch the polishing wheel to the workpiece.

7. Use light pressure and keep the tool moving.
8. Work in small sections.
9. Buff to desired shine.

## POLISHING TIPS:

- Lower speeds work better for polishing
- Too much pressure generates heat and can damage the finish
- Keep the wheel moving to avoid creating swirl marks
- For best results, use progressively finer polishing compounds
- Clean the workpiece between polishing stages
- Secure loose polishing wheel strings before use

## POLISHING COMPOUNDS:

- Coarse compound: Initial polishing, removing oxidation
- Medium compound: General polishing
- Fine compound: Final buffing to high shine

## WIRE BRUSHING

### APPLICATIONS:

- Removing rust and corrosion
- Cleaning metal surfaces
- Removing paint and scale
- Preparing surfaces for welding or painting
- Cleaning between tiles or in grooves

### TECHNIQUE:

1. Install a wire brush accessory.
2. Select medium speed (10,000-15,000 RPM).
3. Put on safety glasses, face shield, gloves, and long sleeves.
4. Secure the workpiece.
5. Turn on the tool.
6. Apply light to moderate pressure.
7. Keep the tool moving to avoid creating grooves.
8. Let the wire bristles do the work.

### ■ WIRE BRUSH SAFETY:

- Wire bristles can break off and fly at high speed
- Always wear full protective equipment including face shield
- Don't overload the brush with excessive pressure
- Wire wheels expand in diameter during use

- Inspect brushes before each use for loose or broken wires
- Never exceed the rated speed of the brush

## WIRE BRUSH TYPES:

### STEEL WIRE:

- For ferrous metals (iron, steel)
- Aggressive cleaning
- Rust removal

### BRASS WIRE:

- For softer metals (aluminum, copper, brass)
- Less aggressive
- Won't scratch soft metals

### STAINLESS STEEL WIRE:

- For stainless steel and other metals
- Won't contaminate stainless steel

## DRILLING

### APPLICATIONS:

- Drilling small holes in wood, plastic, and soft metals
- Detail work and craft projects
- Circuit board work
- Model making

### TECHNIQUE:

1. Install the appropriate drill bit.
2. Select high speed (15,000-18,000 RPM).
3. Put on safety glasses.
4. Mark the drilling location.
5. Secure the workpiece firmly.
6. Turn on the tool and let it reach full speed.
7. Position the bit at the mark.
8. Apply steady, light pressure. Let the bit cut at its own pace.
9. For deep holes, periodically withdraw the bit to clear chips.
10. Reduce pressure as the bit breaks through to prevent splintering.

## DRILLING TIPS:

- Start with a small pilot hole, then enlarge if needed
- Use a center punch on metal to prevent bit wandering
- For plastic, reduce speed to prevent melting
- Don't force the bit - this can cause breakage
- Keep bits sharp for best results
- Support thin materials to prevent flexing

## OPERATING TIPS FOR BEST RESULTS

### DO

- ✓ Use the correct accessory for the material and task
- ✓ Start with lower speed and increase as needed
- ✓ Secure your workpiece firmly with clamps
- ✓ Wear appropriate safety equipment every time
- ✓ Let accessories reach full speed before contacting material
- ✓ Use light to moderate pressure
- ✓ Keep the tool moving to avoid creating grooves or burn marks
- ✓ Take breaks to let accessories cool
- ✓ Inspect accessories before each use
- ✓ Maintain a firm grip on the tool

### DON'T:

- ✗ Force the tool - let accessories work at their own pace
- ✗ Use damaged, cracked, or worn accessories
- ✗ Apply excessive pressure
- ✗ Use accessories rated for lower speeds than your tool
- ✗ Press the spindle lock while the tool is running
- ✗ Put the tool down while accessories are still spinning
- ✗ Use oversized accessories
- ✗ Operate without safety equipment
- ✗ Work with a low battery (reduced performance and control)
- ✗ Use the side of cut-off wheels for grinding

## MAXIMIZING BATTERY LIFE

- Fully charge before first use
- Don't completely drain the battery
- Recharge when you notice reduced performance

- Use the correct speed for the task (higher speeds drain faster)
- Don't force the tool - this drains the battery faster
- Store the battery in a cool, dry place
- Recharge every 6 months if not in use
- Remove battery if storing tool for extended periods

## PREVENTING ACCESSORY DAMAGE

- Use the correct accessory for the material
- Don't force or apply excessive pressure
- Let accessories reach full speed before use
- Don't exceed rated speeds
- Store accessories properly when not in use
- Keep accessories clean and free of debris
- Replace worn accessories promptly

## GETTING THE BEST RESULTS

- Match the accessory to the task
- Use appropriate speeds for the material
- Keep accessories sharp and in good condition
- Work in a well-lit area
- Take your time - rushing leads to mistakes
- Practice on scrap material first
- Keep the tool and accessories clean

## ACCESSORY GUIDE

### GRINDING STONES

#### TYPES:

- Aluminum oxide: General purpose, wood and metal
- Silicon carbide: Hard materials, glass, stone
- Diamond: Very hard materials, ceramics, glass

#### SHAPES:

- Cylindrical: Flat surfaces, edges
- Cone: Inside curves, angles
- Spherical: Contours, concave surfaces
- Wheel: Flat surfaces, edges

## APPLICATIONS:

- Shaping and smoothing metal
- Sharpening tools and blades
- Deburring edges
- Removing rust
- Smoothing welds

## CUTTING WHEELS

### TYPES:

- Reinforced abrasive wheels for metal
- Thin cut-off wheels for precision work

## APPLICATIONS:

- Cutting metal rods and tubing
- Cutting bolts and screws
- Cutting plastic and thin wood
- Detail cutting work

**IMPORTANT:** Only use the edge of cutting wheels, never the side.

## SANDING ACCESSORIES

### TYPES:

- Sanding drums/rolls: Various grits
- Sanding discs: Various grits
- Flap wheels: Various grits

### GRIT GUIDE:

- Coarse (40-60): Heavy material removal
- Medium (80-120): General sanding
- Fine (150-220): Smoothing and finishing
- Extra Fine (320+): Final finishing

## APPLICATIONS:

- Smoothing wood and metal
- Removing paint and finishes
- Preparing surfaces
- Detail sanding

## POLISHING ACCESSORIES

### TYPES:

- Felt wheels: For use with polishing compound
- Cloth buffs: Final buffing
- Wool wheels: General polishing

### APPLICATIONS:

- Polishing metal to high shine
- Buffing plastic
- Removing tarnish
- Restoring surfaces

## WIRE BRUSHES

### TYPES:

- Steel wire: Ferrous metals
- Brass wire: Soft metals
- Stainless steel wire: Stainless steel

### SHAPES:

- Cup brushes: Flat surfaces
- End brushes: Tight spaces, edges
- Wheel brushes: Large surfaces

### APPLICATIONS:

- Rust removal
- Paint stripping
- Surface cleaning
- Preparing for welding or painting

## DRILL BITS

### TYPES:

- High-speed steel (HSS): Wood, plastic, soft metals
- Carbide: Hard materials
- Diamond: Very hard materials

### APPLICATIONS:

- Drilling small holes

- Detail work
- Craft projects
- Circuit board work

## SPECIALTY ACCESSORIES

### DIAMOND BITS:

- For engraving glass, ceramic, stone
- For grinding very hard materials
- Long-lasting

### STRUCTURED TOOTH BITS:

- For wood carving
- For shaping soft materials
- Fast material removal

## MAINTENANCE AND CLEANING

**■ ALWAYS REMOVE THE BATTERY BEFORE MAINTENANCE OR CLEANING!**

### AFTER EACH USE:

- Wipe the tool with a dry or slightly damp cloth
- Remove dust and debris from the ventilation slots
- Check the collet and chuck for debris
- Inspect accessories for damage or wear
- Remove accessories if storing for more than a few days

### REGULAR MAINTENANCE:

- Keep the ventilation slots clean and free of dust
- Use compressed air to blow out dust from the motor area
- Inspect the power cord on the charger for damage
- Check that the spindle lock operates smoothly
- Check that the chuck nut tightens properly
- Inspect collets for wear or damage

### CLEANING:

- Use only a dry or slightly damp cloth
- NEVER use water, solvents, gasoline, paint thinner, or harsh chemicals
- Don't spray cleaners directly on the tool
- Clean the chuck and collets with a soft brush
- Remove built-up debris from accessories

## COLLET AND CHUCK CARE:

- Keep collets clean and free of debris
- Inspect collets for wear or damage
- Replace worn collets
- Don't overtighten the chuck nut
- Clean threads periodically

## STORAGE:

- Store in a cool, dry place
- Remove the battery if storing for more than 30 days
- Keep out of reach of children
- Store in the original case or a secure location
- Store accessories separately in a safe container
- Keep accessories organized by type

## REPAIRS:

- For your safety, all repairs must be performed by an authorized Freedom service center
  - Use only genuine Freedom replacement parts
  - Never attempt to disassemble the tool or battery pack

## TROUBLESHOOTING

### PROBLEM: Tool won't start

- Check that battery is fully charged and installed correctly
- Make sure the switch moves freely
- Try a different battery if available
- Let the tool cool down if it's been used heavily
- Check that the switch is in the OFF position before inserting battery

### PROBLEM: Tool runs but has no power

- Recharge the battery
- Check that you're using the correct speed setting
- Make sure the accessory is properly installed
- Use a sharp accessory - dull accessories require more power
- Don't apply excessive pressure

### PROBLEM: Tool vibrates excessively

- Check that accessory is properly installed and secure
- Tighten the chuck nut
- Replace bent or damaged accessory
- Make sure the correct collet size is being used

- Check that accessory is properly seated in the collet

**PROBLEM: Accessory won't stay secured**

- Tighten the chuck nut more firmly (but don't overtighten)
- Make sure you're using the correct collet size
- Check that the collet is properly seated
- Clean debris from the collet and chuck
- Replace worn collet

**PROBLEM: Accessory wobbles during operation**

- Make sure accessory is fully inserted into collet
- Check that the correct collet size is being used
- Tighten chuck nut securely
- Replace bent or damaged accessory
- Check that collet is not damaged

**PROBLEM: Spindle lock won't engage**

- Make sure tool is completely stopped
- Clean debris from spindle lock mechanism
- Don't force the spindle lock
- Contact service center if problem persists

**PROBLEM: Tool overheats**

- Let tool cool for 15 minutes
- Don't apply excessive pressure
- Use a sharp accessory
- Take breaks during heavy use
- Keep ventilation slots clear
- Use appropriate speed for the task

**PROBLEM: Battery drains quickly**

- Fully charge the battery
- Battery may be old - consider replacement
- Use sharp accessories
- Don't force the tool
- Use appropriate speed for the task
- Let battery cool between charges

**PROBLEM: Accessory breaks during use**

- Don't apply excessive pressure
- Use correct accessory for the material
- Don't exceed rated speed of accessory
- Inspect accessories before use
- Replace worn accessories promptly
- Don't use side of cut-off wheels

**PROBLEM: Poor cutting or grinding performance**

- Replace dull or worn accessory
- Increase the speed setting
- Recharge the battery
- Use the correct accessory for the material
- Don't apply excessive pressure
- Let the accessory work at its own pace

**SPECIFICATIONS SUMMARY**

Model: FT1004

Type: Cordless Rotary Tool

Voltage: 18V DC

Battery: Lithium-Ion

No-Load Speed: Up to 25,000 RPM

Variable Speed Range: 2,000 - 18,000 RPM

Collet Sizes: 3 sizes included

Charging Time: 3-5 hours

Charger Input: 100-240V AC, 50/60Hz

Weight (with battery): Approx. 2.8 lbs

**DISPOSAL AND RECYCLING**

■ DO NOT throw this tool or batteries in household trash!

Electronic waste and batteries contain materials that can harm the environment.

**Please recycle**

- Take to a local recycling center that accepts electronics
- Contact your local waste management authority for collection information
- Return to a Freedom Tools dealer that accepts old tools
- Check [www.call2recycle.org](http://www.call2recycle.org) for battery recycling locations

**SYMBOLS AND LABELS****The following symbols may appear on your tool**

■ Warning symbol - Read manual V Volts ~ Alternating current ■ Direct current ■ Recycling symbol ■ Wear hearing protection ■ Wear eye protection ■ Wear gloves ■ Wear dust mask ■ Electric shock hazard ■ Fire hazard

Thank you for choosing Freedom!

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