E-File Control Checklist

A master reference guide for secure handling, safe speeds, structural precision, and technique.

1. Pre-Operation Setup Checklist

[ ]	**Bit Structural Integrity**	Inspect for bent shanks, missing diamond grit, or chipped flutes. Do not use damaged bits.
[ ]	**Secure Chuck Engagement**	Insert shank completely into the handpiece chuck, leave a 1-2 mm safety gap from the casing, and twist to lock tightly.
[ ]	**Direction Selection**	Set rotational direction based on working hand: use **Forward (FWD)** for right-handed pull strokes (right to left) or left-handed push strokes. Use **Reverse (REV)** for alternative paths to ensure the bit cuts without skipping.
[ ]	**Speed Calibration**	Always start the dial at 0 RPM before activating power. Gradually ramp up to the target operational speed zone recommended for the specific bit material.

2. Core Dynamics Matrix (Speed & Direction)

Operational Phase	Recommended RPM Range	Safe Direction Rule	Mechanical Action
Cuticle Prep (Diamond Bits)	3,000 – 7,000 RPM	Match stroke hand path	Delicate exfoliation; ultra-low pressure prevents groove scars.
Refining Base & Gel Polish	10,000 – 15,000 RPM	FWD (Right) / REV (Left)	Smooths out uneven product surfaces without stripping base layer.
Bulk Extension Removal	15,000 – 25,000 RPM	FWD (Right Hand)	Rapid debulking. High speed minimizes catching or dragging.
Natural Nail Buffing	Under 4,000 RPM	Low speed safety rule	Light surface etching using high-grit bands only. Avoid heat.

3. Safe Technique Execution Rules

[ ]	**Anchor Anchor Anchor**	Always maintain a solid fulcrum finger-rest (pinky or ring finger) on the client's hand or your own hand to eliminate slipping.
[ ]	**Parallel Alignment**	Keep the bit shank perfectly flat and parallel to the nail plate surface. Tilting the tip downward causes deep rings of fire.
[ ]	**Constant Motion**	Never hold a spinning bit in a single spot for more than a split second. Use fluid, continuous sweeping strokes to prevent localized heat buildup.
[ ]	**Feather-Light Touch**	Let the speed of the motor and the grit architecture of the bit do the work. Pressing down forces friction into the living tissue.

4. Wrong vs. Right Control Mechanics

INCORRECT PATHWAY (AVOID)	CORRECT PATHWAY (RECOMMENDED)
Working with the spin (Climbing) Moving the handpiece in the exact same direction that the bit is turning. This causes the bit to lose traction, grip the surface, and rapidly skate or slide across the skin, causing injury.	**Working against the spin (Cutting)** Moving the handpiece in the opposite direction of the bit's rotation. This provides optimal resistance, ensuring the bit cleanly files down material while remaining perfectly under control.
Steep bit angles Digging the nose or tip of a sharp carbide or barrel bit directly into the nail plate. This gouges out trenches and thins the natural nail matrix permanently.	**Flush barrel placement** Keeping the long belly of the bit entirely flat against the nail contour. This evenly distributes pressure across the entire surface area safely.

PRO TIP: Seasoning Brand-New Bits
Brand-new carbide or diamond bits often possess razor-sharp outer rims from the manufacturing process that can easily slice cuticles. Before using a new bit on a real nail, run it at a low RPM (3,000–5,000) against an old manual emery board or glass nail file at a 45-degree angle for a few seconds. This gently dulls down the sharp factory edge without compromising the file grit structure.

CRITICAL SAFETY NOTE: Friction & Thermal Control
E-files remove material through mechanical friction, which inherently generates heat. To prevent painful thermal spikes or burn injuries, follow the manufacturer's operational limits, maintain continuous rhythmic sweeping movements, lift the bit away from the plate frequently to cool, and never exceed 4,000 RPM on raw, uncovered natural nail tissue.