



SCREEN LINE QUALITY GUIDE

Shenzhen, China: Our second home.



MOBILE DEFENDERS

WHOLESALE REPLACEMENT PARTS



INTRODUCTION

At Mobile Defenders, we realize that there is no one-size-fits-all solution for repair shops. That's why we offer a variety of screen lines, each designed to be perfect for a specific market.

This guide is meant to introduce you to all of the different screen lines that we have. Think of it as an introduction to what our screens can do to help you grow your business.

Don't forget that businesses are more than the sum of their parts. If you find yourself curious about anything regarding this document or any other facet of your repair shop experience, feel free to reach out to us at sales@mobiledefenders.com. Our representatives will be more than happy to help you with whatever you need to make your company more successful.

We hope this guide helps you to understand all of the offerings that Mobile Defenders brings to the table. This information will help you understand how to give your customers exactly what they're looking for every time.



OUR SCREEN LINES AND YOU

MOBILE DEFENDERS OFFERS SIX DISTINCT SCREEN LINES TO ENSURE THAT YOU CAN ALWAYS FIND A PART THAT SUITS YOUR CUSTOMERS' NEEDS. EACH AND EVERY ONE OF OUR SCREEN LINES IS DESIGNED WITH YOU AND YOUR CUSTOMERS IN MIND.

(SEE PAGE 5 FOR A FULL COMPARISON OF ALL SCREEN LINES.)



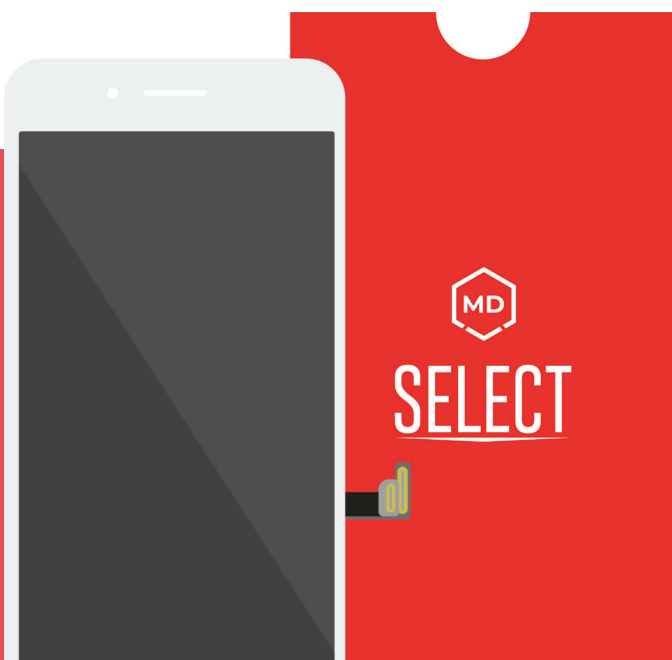
ONE

Our **ONE** line is an on-cell technology build, which integrates the digitizer and LCD in the same layer. Having condensed layers in this assembly reduces the thickness of the display, ensuring consistent fit and finish. This technology allows us to offer a competitive price, making this assembly your new go-to solution for cost-effective repairs.



CHOICE

Our **CHOICE** line was hand-built by our technicians to bring customers a high quality screen assembly at a price point intended for competitive areas. With a cold-pressed frame, vivid color, and uncoated glass for perfect tempered glass adhesion, this assembly has some of the premium features your customers want while still coming in at a low price.



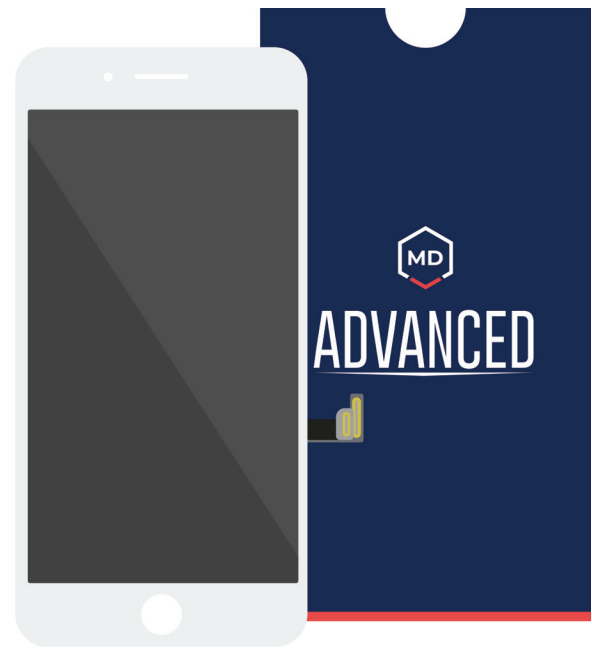
SELECT

Our **SELECT** line is continuously evolving with the latest technology in the industry. Our master technicians worked with our team in China to develop a screen closer to OEM standards. **SELECT** improvements haven't changed the purpose of these assemblies: To bring an affordable high-quality option to be used in repair stores.



EXPRESS

EXPRESS is your solution for whenever you need to complete repairs quickly. These screens have the same specifications as our custom-curated **SELECTS**, but they also come with small parts preinstalled. Plus, unlike our competitors, our small parts are 100 percent hand- tested to ensure that you don't encounter any snags during your repair process. Stock up on **EXPRESS** to save on time and labor expenses.



ADVANCED

ADVANCED screens feature cutting-edge In-Cell technology for an outstanding display. This In-Cell technology means that customers can experience more accurate touch functioning, in addition to a backlight that can even be brighter than OEM. Color fidelity is excellent with these displays, which also feature a smooth frame that slides in for a tight fit.



PRIMEPARTS

Our **PRIME** screens are the industry leading OEM refurbished assembly. These feature OEM-refurbished displays and touch functionality so that your customers are sure to experience the exact quality that their phone had when they first purchased it. Our **PRIME** screens have also historically been resistant to iOS updates which saves you time and prevents headaches.

FULL COMPARISON OF SCREEN LINES

Sometimes it's easier to compare products side-by-side to see what suits your market best. Below you'll find a chart of how all of our products stack up against each other, so you know exactly which one to choose for even the pickiest repair.



	On-Cell Technology	Value Aftermarket	Premium Aftermarket	Premium Aftermarket	In-Cell Technology	Certified Refurbished
DISPLAY	On-Cell Technology	Value Aftermarket	Premium Aftermarket	Premium Aftermarket	In-Cell Technology	Certified Refurbished
FRAME	Cold-Press Aftermarket	Cold-Press Aftermarket	Cold-Press Aftermarket	Cold-Press Aftermarket	Cold-Press Aftermarket	Cold-Press Aftermarket
POLARIZER	Linear	Linear	360 Degree	360 Degree	360 Degree	360 Degree
BACKLIGHT	Aftermarket	Aftermarket	High Brightness & Wide Color Gamut	High Brightness & Wide Color Gamut	High Brightness	High Brightness
PRE-INSTALLED SMALL PARTS	✗	✗	✗	✓	✗	✗
PRE-INSTALLED ALIGNMENT BRACKETS	✓	✓	✓	✓	✓	✓
PRE-INSTALLED BACK PLATES*	✗	✗	✓	✓	✓	✓
FLEX CABLES	Standard Flex	Standard Flex	Premium Coated Flex	Premium Coated Flex	Premium Coated Flex	Original Flex
FRONT GLASS	Standard Aftermarket	Standard Aftermarket	Premium Uncoated	Premium Uncoated	Oleophobic Coated	Original Material
BRIGHTNESS	(4.7" MODELS) 400 nits	350 nits	650 nits	650 nits	550 nits	500 nits
	(5.5" MODELS) N/A	300 nits	550 nits	550 nits	500 nits	500 nits
GAMUT COVERAGE (sRGB)	Typical Aftermarket	Typical Aftermarket	Comparable to OEM	Comparable to OEM	Comparable to OEM	Comparable to OEM
COLOR TEMPERATURE	(IPHONE 6S AND EARLIER) 6500k ± 1000k	6500k ± 1000k	6500k ± 650k	6500k ± 650k	6500k ± 650k	6500k ± 650k
	(IPHONE 7 AND LATER) 6500k ± 1000k	7500k ± 1000k	7500k ± 750k	7500k ± 750k	7500k ± 750k	7500k ± 750k
DELTA E 2000	<10	<10	<8	<8	<7	<7
PRICING	Very Price Conscious	Price Conscious	Quality/Price Compromise	On-the-Go	Quality Conscious	Quality Conscious OEM

*This upgrade is available on iPhone 7 series and up.

☐ = Meets or exceeds OEM Standards

Most of the terms used in our chart are industry-standard terms, but these terms aren't always defined. On the next page, you can find more information. We think it's important that you understand exactly what you're purchasing.

POLARIZED DISPLAYS

Every screen has a polarizer layer, but the type of polarizer can make or break your customer experience. The polarizer allows customers to view their screen through sunglasses. However, there are a few different types of polarizers on the market. We primarily use 360 polarizers, which means your customers can view content on their phone screens through sunglasses no matter how they hold it. We do use linear polarizers on ONE and CHOICE to ensure the assemblies are low cost for competitive areas.



ALIGNMENT BRACKETS & SMALL PARTS

When we talk about parts with “alignment brackets,” we’re referring to all of the brackets and meshes that would otherwise be transferred during a repair. Sometimes the industry calls this feature “sub-kitting.” All of our screens with alignment brackets include the front camera ring, proximity sensor bracket, ear speaker bracket, and ear speaker mesh.

Our EXPRESS screens come with pre-installed small parts. This is also sometimes called “loaded,” and means that they’ll have the ear speaker and front camera with proximity sensor pre-installed.

FRONT GLASS COATING

We know that any great repair professional will be upselling a tempered glass screen protector with every single repair. When you make a successful sale, it’s important to get the glass adhered quickly and efficiently.

All of the front glass used for our screen lines up to EXPRESS come with an uncoated front glass. This allows repair professionals to quickly install tempered glass without having to rigorously wipe the screen. The glass on our ADVANCED and PRIMEPARTS lines come with coating similar to OEM assemblies.

BRIGHTNESS

Consumers want a bright, fully visible screen in all situations, and you want to give your customers what they want. Mobile Defenders is here to help you provide exactly that. Similar to an amp in an audio setup, an LCD doesn't always output the maximum load that the device is capable of. Darker images utilize less of the screen's potential, where lighter images will utilize more of its maximum output. Although the LCD doesn't always push its maximum brightness, it is important to have an adequate brightness so that customers can still see the LCD assemblies outdoors and in direct sunlight.

Brightness is typically measured in nits. The amount of light (luminance) of one nit is equal to 1 candela per square meter. A typical candle puts off roughly 1 candela per square meter. While LCDs in TVs display around 200 nits, widespread outdoor usage of smartphones means that model devices require a higher nit output. An OEM screen is approximately 500 nits, and the lower end of aftermarket screens usually produce around 200 nits. Although a 200 nit screen will perform adequately indoors in lower lighting, your customers need a screen that can stand up to the sun's glare and brightness and still display a visible and clear picture.



As you can see in the picture above, screens with lower nits are harder to see in sunlight.

GAMUT COVERAGE (SRGB)

The ability of a display assembly to produce a proportion of a range of colors is called Gamut Coverage. We measure the range of colors a part can produce and compare it with a standard color gamut—the sRGB gamut. sRGB is used across various industries, and it allows standardization to make sure that colors look the same across a variety of devices.

Original display assemblies are calibrated on a per-device basis, so actual coverage will vary when a display assembly is used on a different device. Higher measurements usually correlate with more saturated colors.

COLOR TEMPERATURE

Color temperature is a metric that is used to quantify the color tone of an LCD. An end-user's experience will be less than ideal if an LCD assembly displays inaccurate colors. Mobile Defenders monitors and standardizes color temperature in our LCD assemblies because we know that screens with poor performance have a negative effect on your bottom line.

The ideal color temperature reading is 6,500k. This is the color temperature of daylight, which is the reference whitepoint of the sRGB color gamut. A deviation from the ideal color temp of 6,500k by 1,000k or less is almost unnoticeable to end-users, and still provides an optimal experience. LCD assemblies with color temperatures below 5,500k will display colors with a red tint, and those with color temperatures above 7,500k will be tinted blue.



ΔE (OR DELTA E) 2000

ΔE (or Delta E) 2000 allows Mobile Defenders to measure our screens' color accuracy beyond human perception. Generally speaking, ΔE is the measurement of change in visual perception between the color that an LCD is intended to display and the color that the LCD is actually displaying. Ideally, we want to stay as close as possible to $\Delta E = 0$.

ΔE	Human Perception
1.0 or less	Not perceptible to the human eye
1-2	Perceptible through close examination
2-10	Perceptible at a glance
11-49	Colors remain more similar than opposite
100	Colors are opposite



A CONTINUING JOURNEY

It's our constant goal to provide you and your customers with the best possible parts, and with parts that fit your every need. That's why we continue to innovate and update our screen requirements to better suit your needs. We know that when you purchase from Mobile Defenders, you'll be blown away by the quality and value of the parts you receive.

WE CAN'T WAIT TO HELP YOU GROW YOUR BUSINESS.