

# THE CARBONE BROTHERS



## ULTIMATE FIN FACE-OFF

FCS vs Futures

# FIN

# SCIENCE

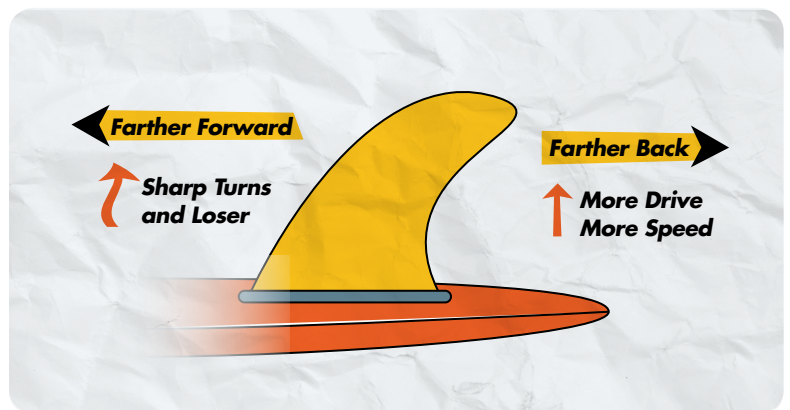


1

## Fin Placement & Performance

### Base Positioning:

The farther back the fin is on the board, the more drive and speed you generate. Moving it forward increases pivot, making turns sharper and looser.

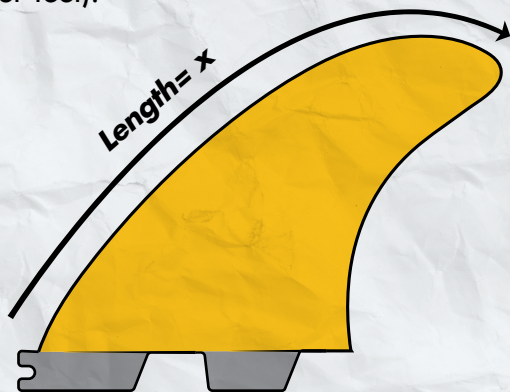


### Rake (Sweep):

The rake is the angle from the base to the tip of the fin.

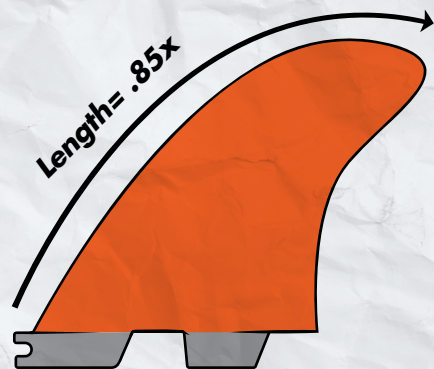
#### Longer rake:

More drawn-out turns, stability, and speed (stiffer feel).



#### Shorter rake:

Easier, snappier turns, and a looser feel (better for tight maneuvers).



2

## Fin Flex & How It Affects Surfing

### What is Fin Flexion?

It refers to how much the fin bends under pressure during turns and how quickly it rebounds.

### How It Works:

When you push into a turn, a flexible fin bends and then snaps back, creating a spring effect that boosts speed.

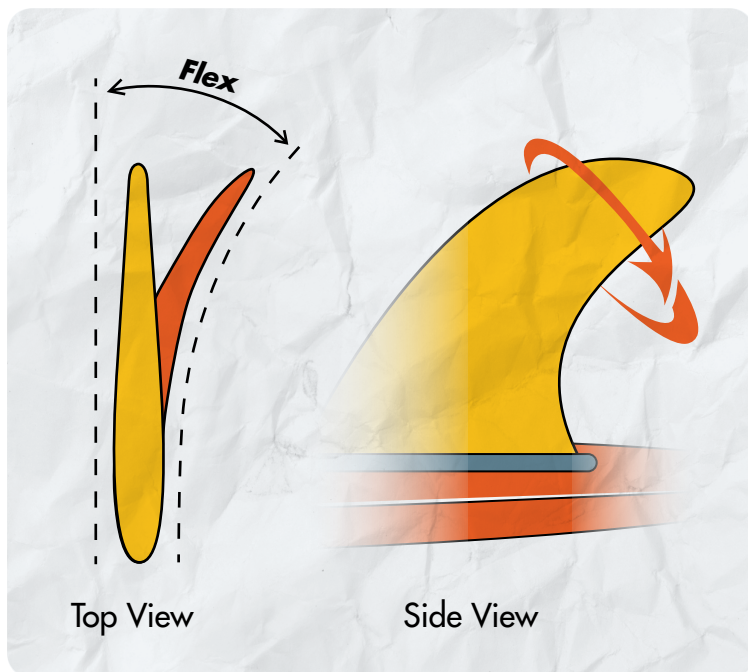
### Flex vs. Stiffness:

#### Less flex:

Better for powerful waves to maintain control and avoid overcompensating turns.

#### More flex:

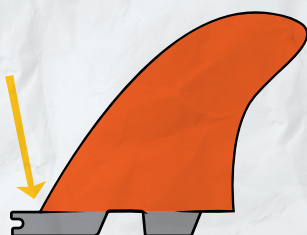
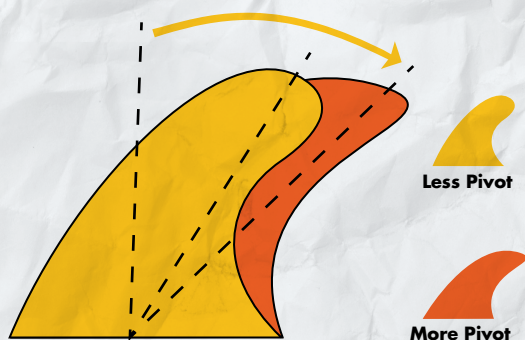
Better for smaller waves, as it helps generate speed.



### Fin Rake/Fin Sweep

The more Rake the less pivot a fin will have

#### Less Pivot



This is the base of the fin - it's where the fin box slot meets the fin template.

3

## Fin Materials & Their Flexibility Levels:

1. **Fiberglass:** Stiffest and most durable.
2. **Fiberglass + Composite Plastic:** Slightly more flexible but still stiff.
3. **Carbon Fiber + Composite Plastic:** A balance between stiffness and responsiveness.
4. **Composite Plastic:** More flex, suitable for everyday use.
5. **Neo Glass (Cheaper Composite Plastic):** Softest and most flexible, good for beginners or small waves.

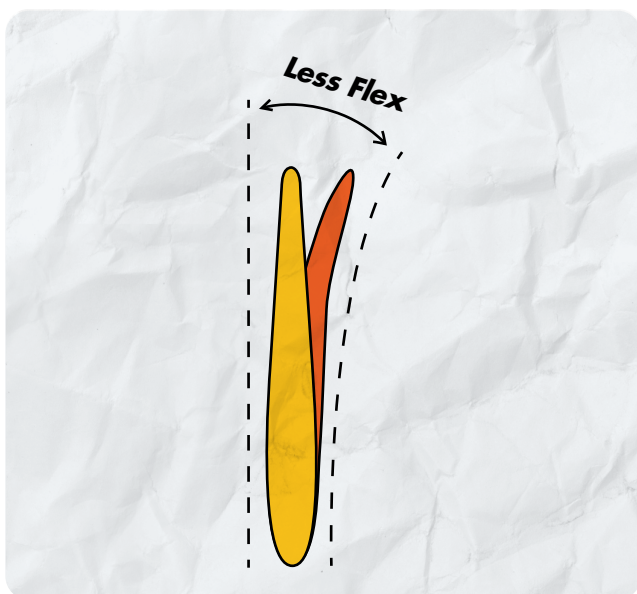
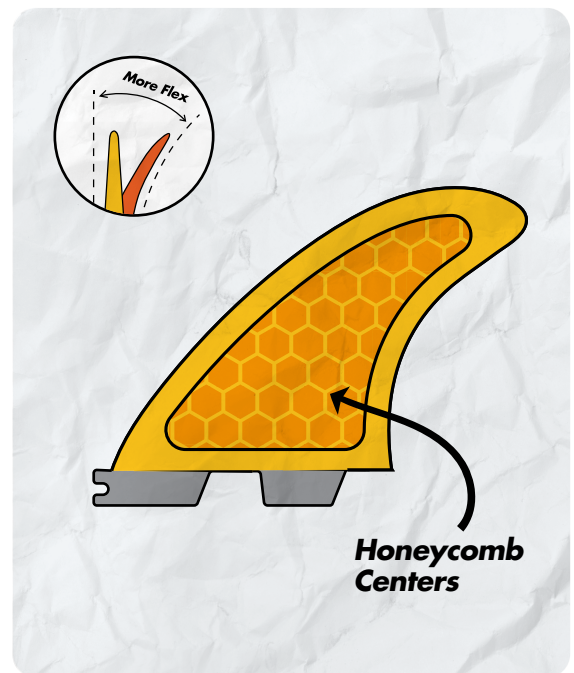


# WHICH FIN IS BEST FOR SMALL VS LARGE WAVE

(BEST FINS TO USE BY WAVE SIZE)

## 1 Small Waves 2-4 FT

- Use **fins with more flex**. That means fins with air cores and honeycomb centers
- For material I suggest composite plastic and neoglass and if you have to carbon fiber with composite plastic with work and have good flex as well
- Use fins with a **Long rake** to generate speed in slow sections
- Use fins with a **short base**, that means a more upright fin, causing you to keep your maneuverability on the wave



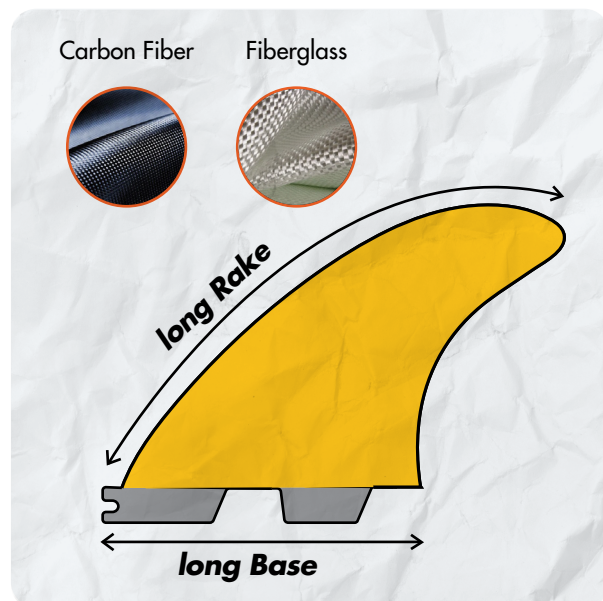
## 2 Medium Waves 4-8 FT

- Use **medium-stiff fins**, this gives you not too much flex and just enough to match the wave
- **The best material is** composite plastic with carbon fiber, carbon fiber and fiberglass composite plastic, make sure not to go to stiff
- Use a **Balanced rake and base** to keep control while still allowing speed generation so an all round fin is best here

3

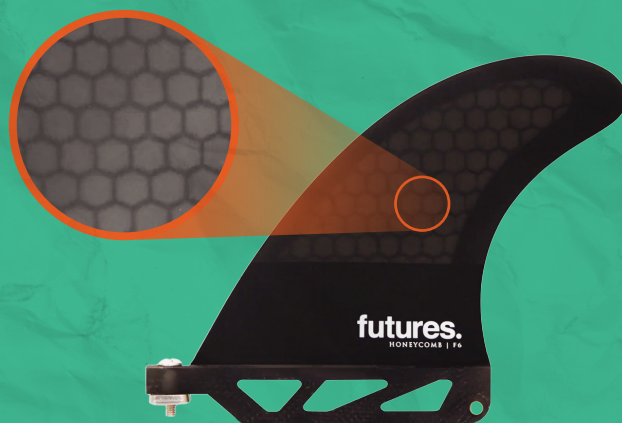
## Large Waves 8+ FT

- Use **stiff fins**, Too much flex here can make you lose control or fly out of turns.
- The best materials are **carbon fiber and fiberglass for MAX stiffness**
- Use fins with a **long base and long rake**. Because the waves are so much bigger it Helps maintain speed and control in critical and fast sections



## Advanced Tips

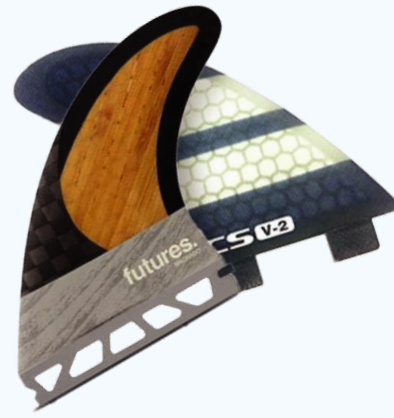
Don't be afraid to push the limits Experiment with fin material, types, and styles on all different sizes of waves. For example, bigger fins on small waves, flexy fins on big waves, shark fins on medium waves. Everyone surfs differently so you might like setups that are not normal and no one surfs on it, it's always good to push the limit!



This is an example of a  
aircore or honeycomb centre

# ROUND BY ROUND,

## WHO WON



0 Point

### Innovation & Design

1 Point

- Reliable, tried-and-true designs
- Pushing innovation, Forward-thinking

1 Point

### Material

1 Point

Both use premium materials (carbon fiber, honeycomb, composite plastic)

0 Point

### Pricing

1 Point

- FCS has Neo Glass (similar, but slightly more expensive at \$95)
- Futures offers the Alpha Line (high-performance but cheaper, \$65-\$80)
- More affordable high-performance options

1 Point

### Durability

1 Point

- Carbon fiber lasts longest if treated well
- Composite plastic wears down faster, but it depends on how well you take care of your fins
- Depends on user care

1 Point

### Convenience & Ease of Use

0 Point

- FCS II: No screws needed, fins pop in and out easily.
- FCS II for easier installation and swaps.
- Requires a fin key and screws, which can be easy to lose.



## **THE CHAMPION IS FUTURES**



**The Carbone  
Brothers Channel**



Watch the Full Episode

**"Futures vs FCS"**



**Thanks For Reading! This is Luke  
Carbone signing off.**