



WARRIOR TRADING

CHAPTER 6. LEVEL 2, TAPE READING, AND HOT KEYS / BUTTONS

PART I: LEVEL 2

341

Today you will Learn

- How to read Level 2
- Tape Reading (Time & Sales Window)
- Adding vs Removing Liquidity
- Dark Pool Routing
- Using Hot Keys

WARRIOR  TRADING

342

Why Is This Important?

- As a day trader you will have a huge advantage if you are able to read the level 2 and time & sales windows.
- These skills may not be necessary for swing traders and longer term day traders, but it's absolutely critical for short term day traders and breakout traders
- It's also extremely important to understand how to read Level 2 so you can make good decisions as you enter and exit trades

WARRIOR  TRADING

343

Learning to Read Level 2

We're going to briefly go over a few things we discussed in the Warrior Starter Course just to make sure we're all on the same page!

Remember that we're ONLY looking at the Level 2 on stocks worth trading. The type of patterns and bullish/bearish indicators seen on Level 2 are meaningless on stocks that don't have high relative volume.

The Level 2 and the 5min/1min chart are the two things that all the traders involved in an active stock are focused on. So learning to read the subtle queues will give you an advantage.

The most important time to watch Level 2 is when you are about to buy, especially when the entry is a BREAKOUT spot.

WARRIOR  TRADING

344

1. Level 1 Market Quotes

Level 1 Market Quotes tell us the current price of a stock

Maker	Price	Size	Maker	Price	Size
ARCA	2.25	67	ARCA	2.26	11

Stock Symbol, can be 1-5 characters, most are 1-4, example F (Ford), GE (General Electric), AEP (American Electric Power), TSLA (Tesla)

Change from Previous Day's Close

Some Level 2 windows include Open Price, Low Price, High Price, Last Price, others can include customizable data points such as VWAP

Volume today is listed on many platforms as well, and it represents the number of shares traded today.

WARRIOR TRADING

345

1. Level 1 Market Quotes

Level 1 Market Quotes tell us the current price of a stock

Maker	Price	Size	Maker	Price	Size
ARCA	2.25	67	ARCA	2.26	11

Bid Price: The highest price buyer. Since this is a buyer, you can sell shares to a buyer right now, as there is somebody bidding 2.25.

Spread = Distance between best bid and best ask. in this case, only 1 cent.

Ask Price: The lowest price seller. Since this is a seller, you can buy shares from a seller right now, as there is somebody selling at 2.26

WARRIOR TRADING

346

1. Level 1 Market Quotes

Level 1 Market Quotes tell us the current price of a stock

Maker	Price	Size	Maker	Price	Size
ARCA	2.25	67	ARCA	2.26	11

Market Makers process orders for buyers and sellers, thereby creating the market. The name of the "Maker", sometimes called ECN or Route is the market where the buyer or seller is placing the order.

Size is the number of shares for sale. Many platforms abbreviate this to make it easier to read by removing 2 zeros. That means 1 = 100. 10 = 1,000 and 100 = 10,000

WARRIOR TRADING

347

The Purpose of Order Routing

Maker	Price	Size	Maker	Price	Size
ARCA	2.25	67	ARCA	2.26	11

The Market for each stock is like an Island. You need a bridge to get to an island. In the market, there are many "bridges". These are electronic pathways to the market called ECNs or Routes. Like bridges, some are free, and some charge a toll. "Express lane" would be high speed routes and they often charge a small fee. Free routes are often slower.

WARRIOR TRADING

348

Market Maker vs ECN

Maker	Price	Size	Maker	Price	Size
ARCA	2.25	67	ARCA	2.26	11

A true market maker is a financial institution that owns shares of the stock and provides liquidity to the market by sitting on both the bid price and the ask price. They buy/sell shares across the spread to turn a profit. This is their compensation for the risk of holding the stock. They will use Algo trading to generate profits.

An ECN can simple be an electronic pathway to the market such as NASDAQ, AMEX, NYSE.

WARRIOR TRADING

349

Level 2 Market Quotes

Level 2 market quotes show us ALL the buyers and sellers

Maker	Price	Size	Maker	Price	Size
ARCA	2.25	67	ARCA	2.26	11
NASD	2.25	8	EDGX	2.26	2
BATS	2.25	1	NASD	2.27	18
NYSE	2.25	1	BATS	2.27	8
NQBX	2.24	1	NYSE	2.27	1
EDGX	2.24	1	NQBX	2.28	1
BYX	2.23	1	BYX	2.29	1
EDGA	2.22	1	EDGA	2.30	3

WARRIOR TRADING

350

Level 2 – Market Depth

Level 2 is very important because it shows you the Market Depth. This shows you the Bid and Ask, but also how many buyers are lined up just below the bid and just above the ask. This tells us if there are big buyers/sellers close by.

Summary: TSLA, 1.22%, 263.46, 273.30, 5.494k

Maker	Price	Size	Maker	Price	Size
BATS	272.71	1	BATS	272.95	1
NASD	272.70	1	IEXG	272.95	1
EDGA	272.60	1	NSX	273.04	1
ARCA	272.59	1	EDGA	273.06	1
EDGX	272.00	2	ARCA	273.07	3
IEXG	271.83	1	EDGX	273.10	8
BYX	270.91	1	NASD	273.17	1
NOBX	270.91	1	NOBX	273.64	1

WARRIOR TRADING

351

Level 2 – Color Schemes

I use a color scheme that highlights a different color for each tier. In this example, all orders on the ask at 272.95 will be green (the best ask price). There are 2, therefore, there are 2 green rows.

All orders at 272.71 will also be green (best bid), there is only 1, therefore there is only 1 green row.

Summary: TSLA, 1.22%, 263.46, 273.30, 5.494k

Maker	Price	Size	Maker	Price	Size
BATS	272.71	1	BATS	272.95	1
NASD	272.70	1	IEXG	272.95	1
EDGA	272.60	1	NSX	273.04	1
ARCA	272.59	1	EDGA	273.06	1
EDGX	272.00	2	ARCA	273.07	3
IEXG	271.83	1	EDGX	273.10	8
BYX	270.91	1	NASD	273.17	1
NOBX	270.91	1	NOBX	273.64	1

Summary: CREX, 126.00%, 0.95, 2.78, 16.795k

Maker	Price	Size	Maker	Price	Size
ARCA	2.25	67	ARCA	2.28	11
NASD	2.25	8	EDGX	2.28	2
BATS	2.25	1	NASD	2.27	18
NYSE	2.25	1	BATS	2.27	8
NOBX	2.24	1	NYSE	2.27	1
EDGX	2.24	1	NOBX	2.28	1
BYX	2.23	1	BYX	2.29	1
EDGA	2.22	1	EDGA	2.30	3

WARRIOR TRADING

352

Thinly traded stock - Lower float stock

Vaxart, Inc. [VXRT] - Level II

Maker	Price	Size	Maker	Price	Size
ARCA	4.07	9	ARCA	4.10	1
EDGA	4.07	7	EDGX	4.11	1
NASD	4.07	1	NASD	4.12	5
EDGX	4.05	1	BATS	4.13	1
BATS	4.04	1	BYX	4.38	1
BYX	3.79	1	EDGA	4.59	1
NQPX	3.35	1	NQPX	4.77	2
NQBX	3.35	1	NQBX	4.77	2
NYSE	3.28	1	NYSE	4.77	1

WARRIOR TRADING interface showing order book for VXRT. The stock is up 153.09% with a price of 2.03 and a volume of 20,244k. The order book shows various market makers with prices ranging from 3.28 to 4.13.

Helpful Tip: Stocks with floats less than 50mil will often trade more "thinly", meaning bigger spreads and quick moves!! These are higher risk, but can be higher reward as well. This becomes exponentially true the lower the float.

WARRIOR TRADING

353

Thickly traded stock - higher float stock

Bank of America Corporation Common S [BAC] - Level II

Maker	Price	Size	Maker	Price	Size
NQPX	29.99	235	NASD	30.00	92
NYSE	29.99	202	ARCA	30.00	36
NASD	29.99	188	NYSE	30.00	19
ARCA	29.99	97	BATS	30.00	16
BATS	29.99	55	EDGX	30.00	10
NSX	29.99	30	NQPX	30.00	4
BYX	29.99	25	BYX	30.01	17
EDGX	29.99	17	NSX	30.01	16

WARRIOR TRADING interface showing order book for BAC. The stock is up 0.60% with a price of 29.91 and a volume of 15,829k. The order book shows high volume from various market makers with prices clustered around 29.99 to 30.01.

Helpful Tip: Higher float stocks like this are more difficult to day trade, and typically the Level 2 is not going to be especially helpful to read due to massive amounts of buyers/sellers and volume.

WARRIOR TRADING

354

Large Cap vs Small Cap

We have a **Large Cap** and a **Small Cap** room at Warrior Trading. But in reality, these rooms are probably better defined as Low Float and Medium Float rooms.

I prefer Low Float stocks between \$1-10 with floats typically less than 25mil shares

Large Cap traders prefer higher priced stocks \$20-200 with floats typically between 50-500mil shares. They wouldn't typically try to day trade extremely large market cap stocks with thick level 2 because they would also be difficult.

Helpful Tip: Higher float stocks like this are more difficult to day trade, and typically the Level 2 is not going to be especially helpful to read due to massive amounts of buyers/sellers and volume.

WARRIOR  TRADING

355

What do I look for in Level 2

1. I look at the spread.
2. I look for the number of Market Makers.
3. I look to see how close together the market depth tiers are.
4. I look for big Bids or big Asks.
5. As a momentum trader, I primarily look at the ASK and the Tape while I'm in a trade, or just about to get in a trade.

WARRIOR  TRADING

356

4. Check for big Bids or big Asks



WARRIOR TRADING

357

Watching Big Orders get Bought Up

An interesting pattern in the Level 2 is that if we see a big order getting filled quickly by either buyers or sellers, it will often attract new traders and generate a pop/drop when the order is filled.

The big seller itself is bearish, however, the buying volume is bullish.

WARRIOR TRADING

358

Live Trade: Big Seller getting Bought Up

WARRIOR TRADING

359

Big Bids or Big Sellers

Oragenics Inc. Common Stock									
▼ OGEN									
TIER AM1			CLOSE	1.15		LAST	1.43		
HI	1.48		OPEN	0.00		VOL	1,169.4		
LO	1.21		CHG	+0.29		CHG %	+25.14%		
<u>ARCA*</u>	1.42	46	<u>ARCA*</u>	1.44	11849	R	1.43	15	
<u>NSDQ</u>	1.42	27	<u>BOSX</u>	1.44	30	R	1.43	1	
<u>EDGX</u>	1.42	5	<u>EDGX</u>	1.44	13	J	1.44	1	
			<u>NSDQ</u>	1.44	4	J	1.44	1	
						R	1.44	43	
						R	1.44	4	
						R	1.44	20	
						R	1.43	8	
						R	1.43	9	
						R	1.43	11	
						R	1.43	2	
						R	1.43	1	
						R	1.43	5	
						R	1.42	7	
						R	1.42	2	

WARRIOR TRADING

360

Big Bids or Big Sellers



WARRIOR TRADING

361

Big Seller at the whole dollar 10.00



WARRIOR TRADING

362



WARRIOR TRADING

CHAPTER 6. LEVEL 2, TAPE READING, AND HOT KEYS / BUTTONS

PART 2: TIME & SALES aka TAPE READING

363

What I look for in the Time & Sales

1. Color of the Print
2. Size of the Transaction
3. Bursts of Green/Red

Price	Last	Time
4.100	61	10:52:14
4.100	180	10:52:14
4.100	100	10:52:14
4.100	100	10:52:14
4.100	500	10:52:14
4.100	200	10:52:14
4.100	197	10:52:14
4.100	91	10:52:14
4.100	100	10:52:14
4.100	103	10:52:14
4.100	122	10:52:14
4.100	3	10:52:14
4.100	100	10:52:14
4.100	103	10:52:14
4.085	140	10:52:14
4.085	100	10:52:14

WARRIOR  TRADING

364

1. Color of the print

Next to the Level 2 window is our Time and Sales window. This shows us each order as it's placed.

Red orders occur on the Bid price

Bright Red (background) occur BELOW the Bid

Green orders on the Ask Price

Bright Green (background) occur ABOVE the Ask

White orders are in between the spread

Orange orders are irregular

Maker	Price	Size	Maker	Price	Size
ARCA	4.07	9	ARCA	4.10	1
EDGA	4.07	7	EDGX	4.11	1
NASD	4.07	1	NASD	4.12	5
EDGX	4.05	1	BATS	4.13	1
BATS	4.04	1	BYX	4.38	1
BYX	3.79	1	EDGA	4.59	1
NQPX	3.35	1	NQPX	4.77	2
NQBX	3.35	1	NQBX	4.77	2
NYSE	3.28	1	NYSE	4.77	1

Helpful Tip: Not all platforms display using the same color scheme

WARRIOR TRADING

365

2. Transaction Sizes

I like to see large transaction sizes to confirm

large buyers are stepping up to the plate.

However, smart routing will often till trades in

dozens of small 100 share blocks. So just

because you are only seeing small blocks doesn't

mean there aren't big buyers.

Maker	Price	Size	Maker	Price	Size
ARCA	4.07	9	ARCA	4.10	1
EDGA	4.07	7	EDGX	4.11	1
NASD	4.07	1	NASD	4.12	5
EDGX	4.05	1	BATS	4.13	1
BATS	4.04	1	BYX	4.38	1
BYX	3.79	1	EDGA	4.59	1
NQPX	3.35	1	NQPX	4.77	2
NQBX	3.35	1	NQBX	4.77	2
NYSE	3.28	1	NYSE	4.77	1

WARRIOR TRADING

366

3. Bursts of Green / Red at the Breakout

If I'm watching the Level 2 and Tape (aka Time & Sales), it's because the stock is worth trading and there is a breakout pattern forming on the chart.

I want to see a burst of green leading to the breakout.

Maker	Price	Size	Maker	Price	Size
ARCA	4.07	9	ARCA	4.10	1
EDGA	4.07	7	EDGX	4.11	1
NASD	4.07	1	NASD	4.12	5
EDGX	4.05	1	BATS	4.13	1
BATS	4.04	1	BYX	4.38	1
BYX	3.79	1	EDGA	4.59	1
NQPX	3.35	1	NQPX	4.77	2
NQBX	3.35	1	NQBX	4.77	2
NYSE	3.28	1	NYSE	4.77	1

WARRIOR  TRADING

367



WARRIOR TRADING

CHAPTER 6. LEVEL 2, TAPE READING, AND HOT KEYS / BUTTONS

PART 3: LEVEL 2 & TAPE READING EXAMPLES

368

Live Trade: 600k Seller Blocking the Breakout

WARRIOR  TRADING

369

Live Trade: Sellers Getting Bought Up

WARRIOR  TRADING

370

Live Trade: 53k Seller \$SFUN

WARRIOR  TRADING

371

Live Trade: 26k Seller \$CARV

WARRIOR  TRADING

372

Live Trade: Big Seller \$ADOM

WARRIOR  TRADING

373

Live Trade: Big Seller \$AVGR

WARRIOR  TRADING

374

Live Trade: Distinctive “halting” appearance example 1

WARRIOR  TRADING

375

Live Trade: Distinctive “halting” appearance example 2

WARRIOR  TRADING

376

Live Trade: Distinctive “halting” appearance example 3

WARRIOR  TRADING

377

Live Trade: False Halt on \$MTSL

WARRIOR  TRADING

378



WARRIOR TRADING

CHAPTER 6. LEVEL 2, TAPE READING, AND HOT KEYS / BUTTONS

PART 4: ROUTING METHODS, LIQUIDITY & DARK POOLS

379

Order Types

There are three basic types of orders you can send to buy or sell shares.

Market Orders: A market order to buy or sell will give you shares at "market price". This is your way of telling the broker to give you shares, and you don't care what price. This typically isn't a good method for day traders because the price we pay will directly impact how profitable the trade will be.

Limit Orders: In contrast to a Market Order, a Limit order requires you to put in a price, which is the MOST you are willing to pay, or the LEAST you are willing to sell for. This is the type of order I use.

Stop Orders: These types of orders are triggered when a stock crosses a certain price. These are typically used as Stop Loss orders, to sell your position at a loss if a certain threshold has been crossed. These can be sent as Market or Limit orders.

WARRIOR  TRADING

380

Order Routing Methods

Think of the market as an island. On this island all the buyers and sellers meet to exchange shares. This is where everyone goes to buy and sell.

There are dozens of bridges to get to this island.

When you send an order from your broker, they will automatically choose which bridge they think is fastest, using a Smart Routing system.

Alternatively, you can choose to directly route through the electronic communications network (ECN) that you prefer. Like bridges, ECN's charges "tolls" or fees for their use. These are in addition to commissions.

Some brokers won't allow you to choose which route you use, and in exchange, won't charge you ECN fees. The problem is that they may choose slow routes and you can't do anything about it.

WARRIOR  TRADING

381

Limit Order

I Use a Limit Orders for all my trades. I set the Limit Price by Default to 5 cents above the ask. I'm willing to pay a little more in order to get into the trade, but not more than 5 cents. This for me is safer than using a Market Order, but still lets me get into trades quickly.

I may adjust this up or down depending on the particular stock and my stop limit.

AVOID SLIPPAGE and use Limit Orders

WARRIOR  TRADING

382

Smart Routing

Smart Routing: Most brokers offer smart routing. Instead of asking you to direct route your order, they will choose the route they feel is best. If they have arranged a discounted rate with a certain broker, they may use that route as a preferred route. They may also see if they have shares available from traders inside the firm before routing your order out to the "island". This may not always be in the best interest of the trader. For that reason, I choose to not use smart routing, and instead direct route my orders.

WARRIOR  TRADING

383

Lightspeed's SuperSmart Orders

SuperSmart Orders: Lightspeed's SuperSmart orders can help achieve better fill prices.

A typical order will send a 4000 share buy order to 1 ECN, such as NSDQ. However, the SuperSmart orders will, for example, send 1000 shares to EDGX, 1000 shares to ARCA, 1000 shares to NSDQ, and 1000 shares to BATS. By sending to 4 routes, you can capture available liquidity without triggering the market makers algorithms that can cause slippage on your orders.

WARRIOR  TRADING

384

Dark Pools

Dark Pools of Liquidity: Dark Pools of Liquidity are like ports the "island" that are holding shares, but nobody can see them. Sometimes these shares are being held by firms or institutions and they trade internally out of this pool of shares. This has a disadvantage for retail traders because if you want to buy 10k shares, you will not have access to the dark pool where 10k may be available. As a result, you pay a higher price. Using Dark Pool Routing, you can now ping the dark pools to see if they have shares available.

WARRIOR  TRADING

385

Prepare Order

I prepare my order and all I need to do is click "BUY" when I'm ready to send it. There is no additional confirmation needed, this order will be live.

99% of my buy orders are going to be on the Ask as a Marketable Limit order. This is because I'm trying to buy at the apex when a ton of other buyers are also coming in.

WARRIOR  TRADING

386

Canceling Orders

If my order is not immediately filled, if the price moves up and skips my order, I cancel it by pressing the escape button on my keyboard. This is a hot key setting.

WARRIOR  TRADING

387

Scaling out of Trades

When I'm scaling out of Trades, whether it's a winner or a loser, I try to sell my shares on the ask to get the best price.

Selling on the ask forces buyers to come to you. This increases the strength of the momentum. This means even though you are selling, it won't show as a red on the Time & Sales. It will still be green because the transaction occurred on the ASK when somebody bought your shares

You aren't feeding the bids and indicating weakness.

If I have to bail out of a trade because it's not working I'll sell on the bid, but otherwise I sell on the ask.

WARRIOR  TRADING

388

How to Hide Shares

Using ARCA and other Direct Routes you can choose to hide your shares.

Some brokers require that you show a min of 10% of your size, while others allow you to hide the entire order.

Some brokers charge you to hide shares on a per share basis, others have no extra charge.



389

Adding / Removing Liquidity

Adding Liquidity to the Market means you are adding shares that can be bought or sold. This would be any order that is not immediately "marketable" or filled when it's placed

By Adding Liquidity to the Market, many Market Makers will give you ECN Rebates

When you Remove Liquidity you may get charged an ECN Fee.

At the end of the day, ECN fees and rebates aren't a big deal, and they aren't something you would want to design your trading strategy around. They are just something to be aware of.



390

Adding Liquidity

Adding Liquidity to the Market means you are improving market liquidity by adding shares.

This would be considered ANY order that is not immediately Marketable.

When you Add Liquidity, you get PAID ECN rebates. ARCA pays .002

This means if I sell 10k shares on the Ask ARCA will pay me \$20.00

WARRIOR  TRADING

391

Removing Liquidity

When you place a market order, you are taking liquidity away from the market.

Some brokers will charge you an ECN fee for this. It may be anywhere from .0025-.01

This can be costly, but is the price to get fast executions with direct market routing

WARRIOR  TRADING

392



WARRIOR TRADING

CHAPTER 6. LEVEL 2, TAPE READING, AND HOT KEYS / BUTTONS

PART 5: HOT KEYS

393

Hot Key Settings

Using Hot Keys I can prepare my orders AND send my orders. Hot keys help avoid wasting time typing up our orders, thinking about the math and amounts, and avoids the risk of irritating typos.

I have two different types of Hot Keys

- Hot Keys that send live orders
- Hot Keys that prepare orders and make changes on my order entry window

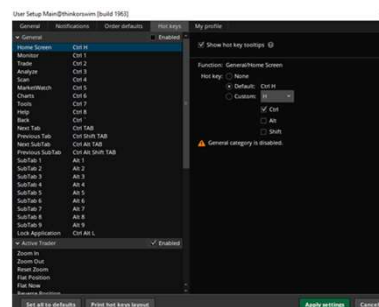
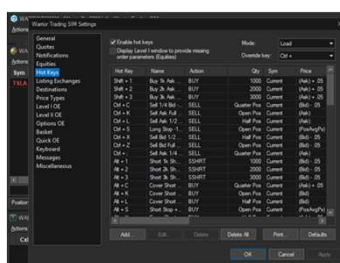
WARRIOR  TRADING

394

Using Hot Keys

Using Hot Keys allows very quick orders.

Most Brokers provide Hot Key configurations that you may be able to customize for your preference



WARRIOR TRADING

395



WARRIOR TRADING

CHAPTER 6. LEVEL 2, TAPE READING, AND HOT KEYS / BUTTONS

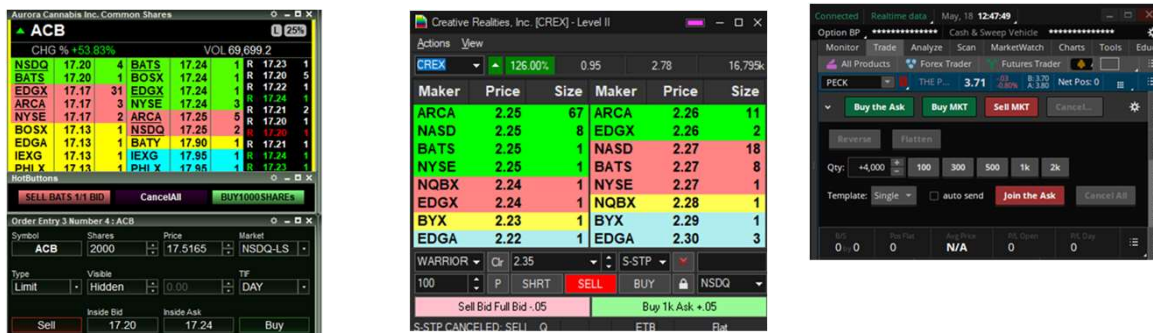
PART 6: HOT BUTTONS

396

- 5 Get video of LIVE TRADING using Hotkeys and GoPro etc
Ross Cameron, 2/17/2020

Hot Button Settings

Hot Buttons are Hot Keys, except their buttons you press. You can often have the buttons essentially do the same thing as a hot key would do, but they work with a click instead of pressing keys. Some people prefer them, and some platforms only offer them, so it's good to understand how they work!



WARRIOR TRADING

397

Blank slide for additional
note-taking

WARRIOR TRADING

398