



## **ClearStation Education: Trending**

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## Trending

MACD

MACD Histogram

Volume

Moving Averages

A trend takes place when prices of a stock continue to rise or fall over a period of time. In an uptrend, the each high is higher than that of the day before. And in a downtrend each low is even lower than the last.

ClearStation stresses the importance of trending. The tendency to trend is the key observation to make on a stock you are considering for investment. Why? Because it's easier to make money on a stock that is moving in a certain direction rather than going with one that is flapping up and down like a beached fish.

Not all stocks trend. By being able to identify those stocks that do, we feel you will be more successful in your investing.

In this section, you'll learn:

- The merits of following a **trend**
- How to read a **MACD** graph
- To be wary of **volatility**
- How to use the **MACD histogram**
- What **volume** signifies
- How to use **moving averages**

## Trending by kensey

The price action of a stock is categorized as either trending (moving generally up or down) or range bound (sideways). Trending stocks are going somewhere in a vertical direction, while range-bound stocks travel in a horizontal direction.

A trend exists when prices keep rising or falling over time. This is called directional price action. In an uptrend, each rally (upsurge) penetrates a higher price level than the prior rally, and each retracement (fall) stops above the level associated with the prior retracement. It's like a set of stairs at an angle.

**MACD helps identify whether or not a stock trends.** We feel it is far easier to make money by investing in stocks that trend versus stocks that do not trend.

ClearStation maps MACD action onto the top of the price graph so that a stock's trending tendency is readily apparent. Green bars suggest uptrends while downtrends are represented by red bars. While we don't purport to have built an automated trading system, we think the bars will help you identify which stocks exhibit good characteristics of trendability. If the bars above the price graph are well timed, that stock trends. If the bars above the price graph are ill timed, that stock does not trend. By avoiding stocks that do not exhibit the ability to trend, you will be more successful in your investing.

### America Online Inc (AOL)



### What's the big deal about trending?

It's far easier to make money in stocks that trend than in stocks that only fluctuate up and down.

The **first assessment** you should make of a stock is whether it's trending or whether it's range bound. A stock in an uptrend has a MACD indicator graph (the third graph from the top) where the centerline (0.0) is pushed down towards the bottom, or a MACD indicator graph where the centerline doesn't even exist (the bottom of the indicator graph is the centerline). It's in "positive ground."

The magnitude does not matter that much. What matters more is where the 0.0 line sits. Is it in the middle (a crapshoot)? Is it towards the top (downtrend) or is it at the bottom (uptrend)?

Take a look at the MACD graph for AOL. Do you see how the centerline is pushed to the bottom and how the red and blue lines soar above it? It's signaling you to an uptrend. Now look at the price graph and see how the soaring prices of the stock are echoing what the MACD graph was telling you. If you had picked up on AOL's uptrend when the latest MACD green trending bar was born (in early June), you would have made a timely entry into the stock and done well.

Needless to say, trending is the way to go!

## Healthy Crossover by kensey

### Mindspring Enterprises Inc (MSPG)



A MACD crossover occurs when the red line crosses over the blue line on the indicator graph.

Take a look at the strong crossover of the MACD signaling lines that occurred in mid-June.

This event is marked by the little green up-arrow on the MACD indicator graph. The arrow corresponds to the start of the green bar over the price graph. When this happens to a stock, it's said to have "gone MACD green."

What makes the MACD crossover that occurs in mid-July a "nice divergence?" For one thing, the crossover occurred **above the centerline**. This is most important, because it shows that this stock is in good shape from the get-go and not coming off a steep sell off.

**Here's a tip:** Get into the habit of eyeballing the MACD lines before you look at the price graph, and try to envision what the price graph is going to look like. This will help you interpret what this indicator means.

## To Trend or Not to Trend by kensey

The strongest MACD crossovers occur near the centerline.

MACD Crossovers near the centerline usually herald the start of a new upward trend. Crossovers that occur higher above the centerline tend to indicate the continuation of an existing trend. It's all about center, and where the crossover occurs.

### Unisys Corp (UIS)



This stock has been trending up so consistently that, until recently, the MACD indicator graph (3rd from the bottom) is entirely in positive ground. So, in this case, the bottom of the indicator graph *is* the centerline in this case. This only occurs for the strongest stocks.

That being said, the crossovers that occurred in mid-April and mid-June are the best ones on the graph. This is because the fast line crosses over the signal line right **at the centerline**. The fast line is drawn in red and the signal line is drawn in blue. We'll get to precise definitions in a moment. The important thing now is to do a little pattern matching.

Both of the crossovers in mid-April and mid-June occurred after benign basing periods in which prices changed little. These basing periods are captured underneath the trendlines drawn in black.

The green MACD trending bar that was drawn in mid-March occurred higher above center. The trending bar that is starting to trace in mid-July is also occurring high above center. The reason for the July trending bar is the momentary dip in prices in early July. Even though the trending bar was taken down, it did not signal an end to the uptrend, but rather, that the trend is pausing and the rate of acceleration in prices is slowing. For the trend to end, the MACD lines must penetrate the centerline and start tracing below it in negative ground.

## How Signaling Algorithms Work by kensey

There is no substitute for looking at graphs and pattern matching in your brain. In fact, everything you need to know can be learned by looking at a lot of graphs. And the MACD graph is one of the most informative!

MACD looks at the interaction of two moving averages. The long-term moving average is 26 days, the short-term is 12 days. When prices accelerate from either a trough (which is some drastic sort of price decline) or a retracement (a more healthy movement sideways which doesn't violate that basic rules of uptrend), the shorter-term moving average overtakes the longer term one, crosses over it, and then moves beyond.

The difference between the long term and short term moving average is the fast line, drawn in red. The MACD Histogram gives you a way to determine its strength. A smoothing (or rate of change) of this line is the slow line (drawn in blue).

When the fast line crosses above the slow line, prices are diverging and accelerating on the upside. Divergence simply means a significant change in behavior.

When a crossover occurs, it's examined to see if the crossover occurs above or below the centerline. Crossovers below the centerline are ignored. A stock is deemed to be weak if the gravity of the retracement (or trough) is serious enough to pull the MACD lines below center. Strong stocks stay above center for years at a time. Those that get hit hard enough to pull the lines below center are therefore deemed not worthy of consideration.

So, crossovers below center are ambiguous.

What happens when a crossover occurs below center? It's not thrown out. This fact is noted. The crossover could have occurred just a touch from center, so it's just a matter of one more day that carries it forward enough to "go positive." Once things go positive, a signal is raised. This is not a strong signal. Crossovers that originate below center must be taken with a grain of salt. But currently, we are not throwing them out.

Again, look at the graphs. If you see a stock where the MACD lines are below center and you can see declines in the price graph, this is clearly a time to look elsewhere.

Crossovers above center are flagged if the rate of divergence (between the fast and slow lines) is significant. This gives birth to a green bar.

Timing is everything. Ignore price action at your peril. What you should get out of the green and red striping is a clue to whether you should wait, or whether it's time to jump. Urgency, or worrying about missing out on this, that, or the other thing, should never have to enter the equation. That's the goal.

When the fast line crosses below the slow line, prices are diverging on the downside. This can cause a red trending bar to be born. The exception is if this cross below occurs above the centerline. This usually indicates a trend is either pausing or simply slowing down.

Cross-below that occur below center cause a red bar to immediately be raised. This mirrors birthing of green bars on crossovers above center.

If a cross-below occurs above center, it is not thrown out, but noted for the record. The signaler then waits to see if the progression takes the MACD lines below the centerline, or a rapid breakdown in

prices occurs. If they do or this does, a red bar is raised. This mirrors action on the cross-above side of the equation.

So, treatment in the bullish case (cross-above) and the bearish case (cross-below) is symmetrical. There are many heuristics thrown in (the signaler gets more aggressive on stocks with a demonstrated tendency towards either strength or weakness). The signaler also starts to shut down for stocks that gyrate meaninglessly across a horizontal plane. But that is generally how things work, so you should be able to start making sense of why red and green bars appear above the price graph.

## Where Did the Green Go? by kensey

### Time Warner Inc (Holding Co) (TWX)



Is it time to bail out of a stock when a bullish green bar is pulled down? Not necessarily. The MACD green trending bar that was born in early March was pulled down in late March. This happened because the fast line crossed below the signal line due to the momentary dip in prices in late March. This was not a serious dip. Prices were able to stay above the 13-day moving average which is a sure sign of short term health. In fact, after forming a cup shape ("cupping") on the 13-day EMA for a few days, the rally in prices continued.

What happened here? The rate of increase in prices in TWX from mid-February through March was remarkably constant. If the rate of increase in prices is constant, any divergence will trigger a change of condition a one way or the other. A momentary dip will cause the fast line to cross beneath the slow line and the trending bar will be taken down.

When the MACD green trend bar was taken down in late March, an interesting thing happened. Prices kept rising throughout April and May, but the MACD lines on the indicator graph gradually declined.



The reason for this phenomenon is that the rate of change in the upward acceleration in prices slows considerably. Prices are still going up, but not as fast. Once the rate of increase in prices slows, the longer term moving average (26-day) starts to catch up to the shorter term EMA (nine-day). Therefore, the difference between these two moving averages decreases. Hence, the decline in the MACD lines.

If you eyeball the 13-day and 50-day EMA lines on the price graph, you can see that on April 1 (or there about), the purple line (which represents the 50-day EMA) starts to close in on the light green line (which represents the 13-day EMA). MACD uses moving averages of different lengths than these, but the affect is the same.

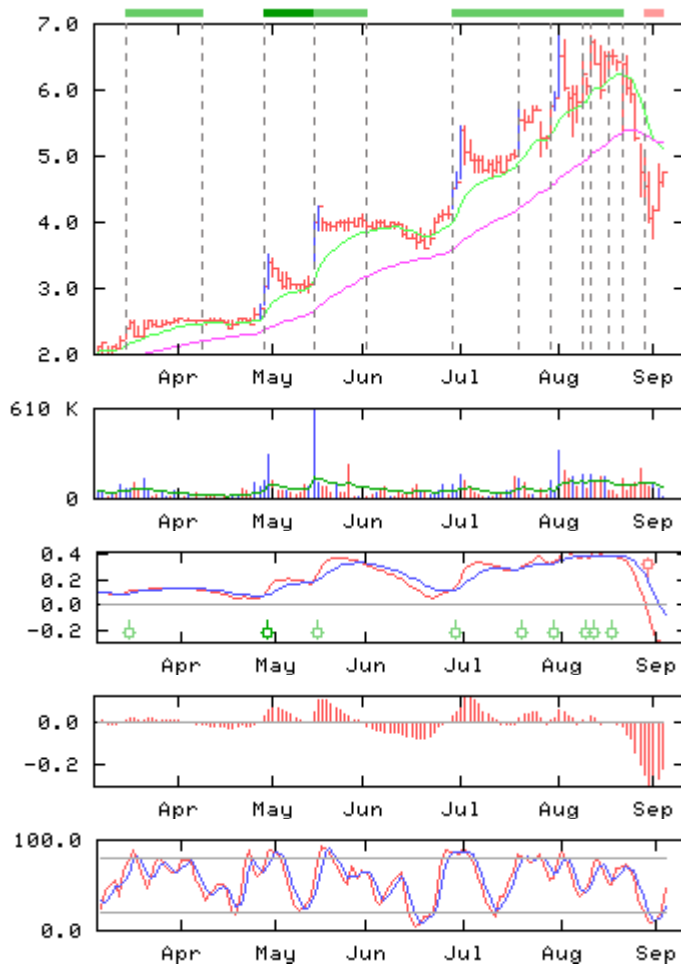
So, when a bullish MACD green bar stops it doesn't mean that you should bail. It does mean that it's time to start paying closer attention. You don't want to get shaken out during normal retracement action. Normal and healthy retracement action will stop a bullish green bar, but that doesn't mean you have to exit a position, only to see prices resume rising after you get out.

I usually wait for the MACD lines to dip below the centerline before getting completely out. The end of a MACD green bar might be a good time to lighten the load and take some profits, but it doesn't necessarily call for dumping out of your entire position.

So many stocks stay above center for years. You want to hold onto these.

## Volatility by kathia

### Hansen Natural Corporation (HANS)



What's up with those funky spiked circles on the MACD graph?

When you see a "spiked circle", it indicates that a trend has started. The green marks at the bottom of the MACD graph represent uptrends while the red ones at the top denote downtrends. (They correspond with the trending bars on top of the price graphs.)

Trends are good, but when you see lots of the trending flags in a row it is not a positive sign. In fact, it's exactly the opposite.

Let's take a look at HANS. Fluctuations in the closing prices caused the MACD fast line (red) to bounce off of the signal line (blue). Each time the red line went down, crossed, and jumped back up over the blue line a new green flag was raised. Over a period of a month (mid July to mid August), five flags were generated.

The fact that so many signals went off should give you some important insights. The succession of flags is clueing you into the volatility of the stock. It's acting erratically, and that is not a desirable trait. In this case, it was a fairly evident sign of an ensuing fall in the price.

There is no telling what a volatile stock will do. Stocks that have fairly well timed signals and act more predictably offer better results.

## More Green Than Red by kensey

### Microlog Corporation (MLOG)



If you spend a lot of time looking at ClearStation graphs, you will soon notice that there are more bullish green bars drawn on the tops of graphs than red bars. The reason for this is that a bearish red bar is born only when there is a crossover of the MACD lines below center. This does not happen as frequently as do bullish crossovers above center. This is partly due to the fact that a lot of individual stocks right now are in fact above center.

I just ran a query that told me that 7102 stocks have MACD lines above center, and 5183 have MACD lines below center. This tells me that there are more stocks right now that have an upward bias.

MLOG has obviously been in a long-term downtrend. I can tell this because there are a lot of red bars being drawn on the price graph. You can see that the red bars start whenever there is a crossover of lines that occurs below center. The crossovers that occur closer to the center are better signals. The crossovers that occur towards the bottom of the price graph are confirmations that lower prices are on the way.

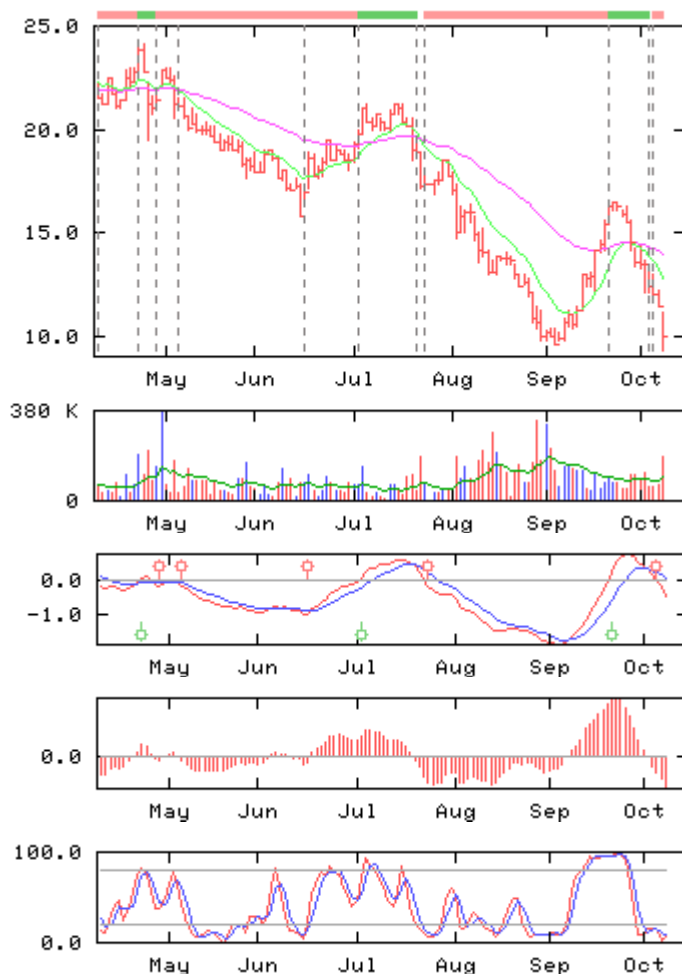
If you eyeball the stochastic indicator graph, you can see that whenever this stock gets overbought (which happens when the stochastic lines cross above the upper reference line), it's a pretty good sell signal.

Another reason that there are not as many red bars, is that lately it has been characteristic of stocks to correct in short staccato bursts. We all know that retracements in the markets these days happen faster, deeper and are shorter lived. Then the bull trend resumes. For sure, you'd be hard pressed to see a red bar over a major market index.

I look more to stochastic for candidate stocks to short. Stochastic does a better job of locating stocks that are moving higher in the short term, but within the context of a longer-term downtrend. In this case, the fact that stochastic crossed the upper reference line in mid April offered a strong sell signal.

## Ill-timed Green Bars during a Downtrend: PTEL by kensey

### PowerTel Inc (PTEL)



When evaluating the trending bars above a price graph, the color that dominates is the color that counts. When red dominates, give less weight to the green bars. When green dominates, give less weight to the red bars.

PowerTel went into two eight-week downtrends that stretched two longish red bars across the top of the price graph. When stocks trend down, prices bounce and short lived rallies ensue. Inevitably, existing shareholders sitting on paper losses try to make it back by buying again at a cheaper price. This is called dollar loss averaging. Or shorts that are sitting on gains head to the cashier stand.

Only add to your holdings ("pyramid") upon winning positions. Do take profits. The seller is doing the right thing, the buyer is doing the wrong thing. Notice that volume during both of the short-lived rallies that produced green bars was thin. This does not indicate a strong trend up.

The short-lived rallies within the graph's six-month downtrend will sometimes persist long enough for a green trending bar to be traced on top of the price graph. These have got to be taken with a grain of salt. These usually are not buying opportunities. You have to side with the color that predominates and if it is red, pass on a long trade.

I like the green bar that traced in July a bit better than the bar that traced in September. The July MACD green bar came off relatively low volatility and prices were able to cross the 50-day EMA (that's the purple line).

But alas, with so many stocks out there, it makes more sense to look for opportunity stocks where green dominates the price graph.

Another obvious sign of weakness is that the MACD centerline is near the top of the MACD indicator graph. The MACD lines cross above the centerline in slow moving waves, but these look like the tips of mountaintops, without the persistent bulk that sits underneath.

Another obvious sign of weakness is that the 13-day EMA is more often than not below the 50-day EMA. This means the stock has shown consistent short-term weakness.

## Cementation of the MACD Lines, Part 1 by kensey

### Pacificare Health Sys Inc Cl B (PHSYB)



When there is absolutely no change in price, MACD gets a little less useful and signals with a bit of a knee jerk; it tends to react emotionally rather than wisely.

In the case of Pacificare Health Systems, prices are increasing constantly, at a rate of approximately 1/4 point each day.

Constant change is reflected in MACD as the cementing of the lines that then trace horizontally across that indicator graph. The level at which the lines cement is indicative of the health at that level. It's more of a phenomenon, or something you can dissect in a lab than something you can trade by, but if you are vested when cementing occurs, you have a nice easy ride ahead of you.

Cementing is often accompanied by diminishing volume. This is not a bearish occurrence. It simply means that existing holders of stock are not finding any reason to sell, and there is not enough news or change in the fundamental outlook in the company to attract new blood. This makes sense as volume in quantity often carries a bias that would push the stock in one direction or another. As it stands, an existing bias that was established earlier is carrying through to sustain the movement forwards.

MACD will be extremely reactive to this situation. A change in prices the least bit down will cause an existing MACD green trending bar to be taken down, and any increase in prices above the seemingly built-in flat rate of increase will cause a new green bar to be born. But owing to the dynamic that is causing cementing to occur in the first place, prices will navigate back to the state (of normalcy) where the constant rate of change applies, and the trending bar will appear, in retrospect, to be ill-timed.

The reason I am pointing this out is that understanding this aids in a better understanding of MACD. MACD is good at pointing out divergences in prices. This means it will tell you when a stock that is in a downtrend is starting to turn around and begin an uptrend. MACD is therefore good at identifying points at which turns are being made, but not great when the road is straight ahead.

## Cementation of the MACD Lines, Part 2 by kensey

### Global Marine (GLM)



Global Marine has been perpetually weak since the red bar appeared in mid May. During this time, prices have been persistently below the 13-day EMA and the stochastic lines have been extremely depressed. This is what a downtrend is all about. The reason you don't see more of this kind of stuff is that downtrends are usually of a much more short and vicious nature. Long and steady declines are not as common as one would think.

The reason has to do with the dynamics of the driller group. These dynamics change very slowly and then persist. Yet everyone thinks that things are about to turn, so the selling is not a cattle rush towards the gate. Actually, its been my experience that slow rate declines are more bankable, and drastic declines (not price shocks or gaps that cut a stock in half) are more likely to turn around sooner.

The MACD lines cemented below the centerline in mid June. This means a constant rate of change down. The pace is approximately 1/4 point each day. You can see by eyeballing the 13-day and 50-day EMA's that they are traveling at approximately equal distances apart. Since MACD is derived from the difference between the 9- and 26-day EMA, the equidistant thing between these two happened sooner.

Note that, ever since the MACD lines cemented and flat-lined, volume has diminished. This is typical.

## Depth and Dimension by kensey

The MACD Histogram gives depth and dimension to what the MACD lines are telling you.

The MACD Histogram measures the difference between the MACD fast line (in red) and the MACD signal line (in blue). If the fast line is above the signal line, the MACD Histogram is positive, and the bars are drawn above the centerline. If the fast line is below the signal line, MACD Histogram is negative, and the bars are drawn below the centerline.

### Chrysler Corp (C)



The MACD Histogram indicator graph is the second from the bottom. The MACD indicator graph is right above that one. The two are used in conjunction with one another.

Do you see that smallish hump above the centerline on Chrysler's MACD Histogram indicator graph that occurs in mid April? That's a bearish development. Why? Because the hump is smaller than the preceding hump above the centerline, **yet** prices are higher. In other words, there is a divergence between the events on the price graph and the Histogram. On the price graph we are seeing new highs, yet on the MACD Histogram, quite a small hump is being traced.

Does this mean that mid April's short green bar is bogus? Not entirely. The green bar was born when there was quite a bit of up volume, as indicated in blue on the Volume graph (which in this case was treacherously deceiving). You simply can't be sure what is going to happen next when dealing with the right edge of any graph, and the bullish green bar above the price graph does terminate correctly after the retracement begins.

When MACD Histogram starts to tick down right after a bullish green bar is born, that's the time to watch carefully and get ready to bail. It means that a new leg on an uptrend might be failing.

## Maxing Against the Ceiling by kensey

What does it mean to say that a stock is "maxing against the ceiling?" It means that it is doing so well that the bars on the MACD Histogram indicator graph are hitting the top. It means unequivocally that new highs in the MACD Histogram confirm the upward direction in that stock's prices.

When you see this happening, you know right away that it's a very good thing.

### Vari-L Company Inc (VARL)



The hump being traced by the MACD Histogram beginning in mid April is against the top of the MACD indicator graph (the second from the bottom). This confirms the record price highs that are occurring on the price graph. Record highs on the price graph are drawn in blue. Blue is good. I also like the way blue dominates the bars on the Volume graph. Good stuff.

Even though the bars of MACD Histogram have dropped somewhat below the ceiling, things still look bullish. Why? Because maxing against the ceiling foretells that more bullish action is on the way.



## Constant Rate of Change by kensey

Dow Jones 30 Industrials (\_INDU)



Throughout March, and for most of April, the rate of increase in the DOW was so constant that MACD Histogram doesn't really tell you anything that's meaningful. The uptrend underneath the bullish green bar is so linear that the moving averages used to derive MACD are essentially moving in lockstep. There is simply not much of a notable divergence in prices.

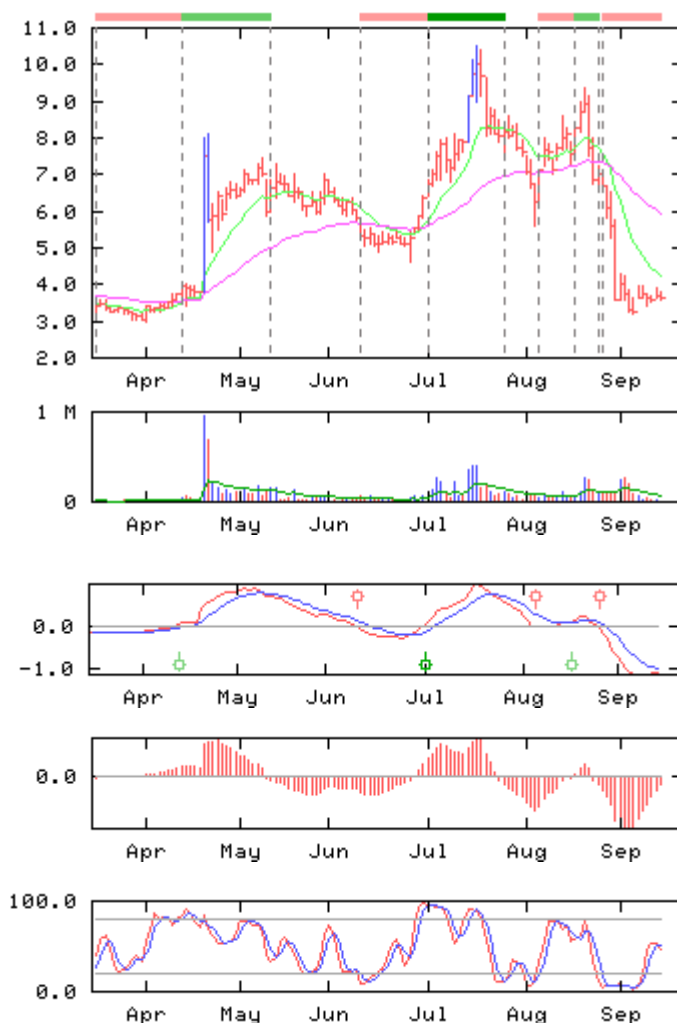
MACD is best used to detect price divergences. It's most informative when changes prices are changing direction. Once that change of direction is consummated, the subsequent crossovers in the same direction (bullish in the case) are not as informative.

MACD Histogram hits the ceiling in February. It starts tracing down, approaches the centerline, and proceeds to wobble. The humps in March and early April are infinitesimal.

As you can see, MACD Histogram had big things to say in February. It shouted out from a megaphone. But once the uptrend got underway, there really wasn't much else left to say.

## Dealing with Ill-timed MACD Bars by kensey

### Image Entertainment (DISK)



In mid-August, volatile price action in Image Entertainment (DISK) sent out a green MACD trending bar that was ill timed. It would have lead to a poor trading decision on the long side if it were interpreted in a bullish light without taking into consideration a few caveats.

The tip-off that something was amiss was the big increase in volatility. Prices fell from the mid July peak of 11 dollars per share down to 6 dollars a share in a little over two weeks.

The red trending bar that then started to trace in early August was very ill timed as it appeared at the absolute low of this downward price break. Bars that are this ill timed bespeak of oscillation and not trending. Volatility also picked up significantly. If you eyeball the dark green bar of early July, you'll see that it was born in a period of very low volatility. The price bars in early July are very tight and the price action did not include a lot of intraday swings. This contrasts sharply to the picture we have of this stock in mid-August.

This point outs out a fairly common pattern of price action in smaller cap issues. The first wave up starts on low volatility and decent volume. Volume picks up and drives the move forward. Finally, the stock plummets (and the green trending bar is yanked down). Volatility increases as prices drop steeply. In such a steep price drop, it is best to stand aside as price action becomes unpredictable and classical technical analysis techniques become less useful. In this case, a price spike up caused a green trending bar to be born.

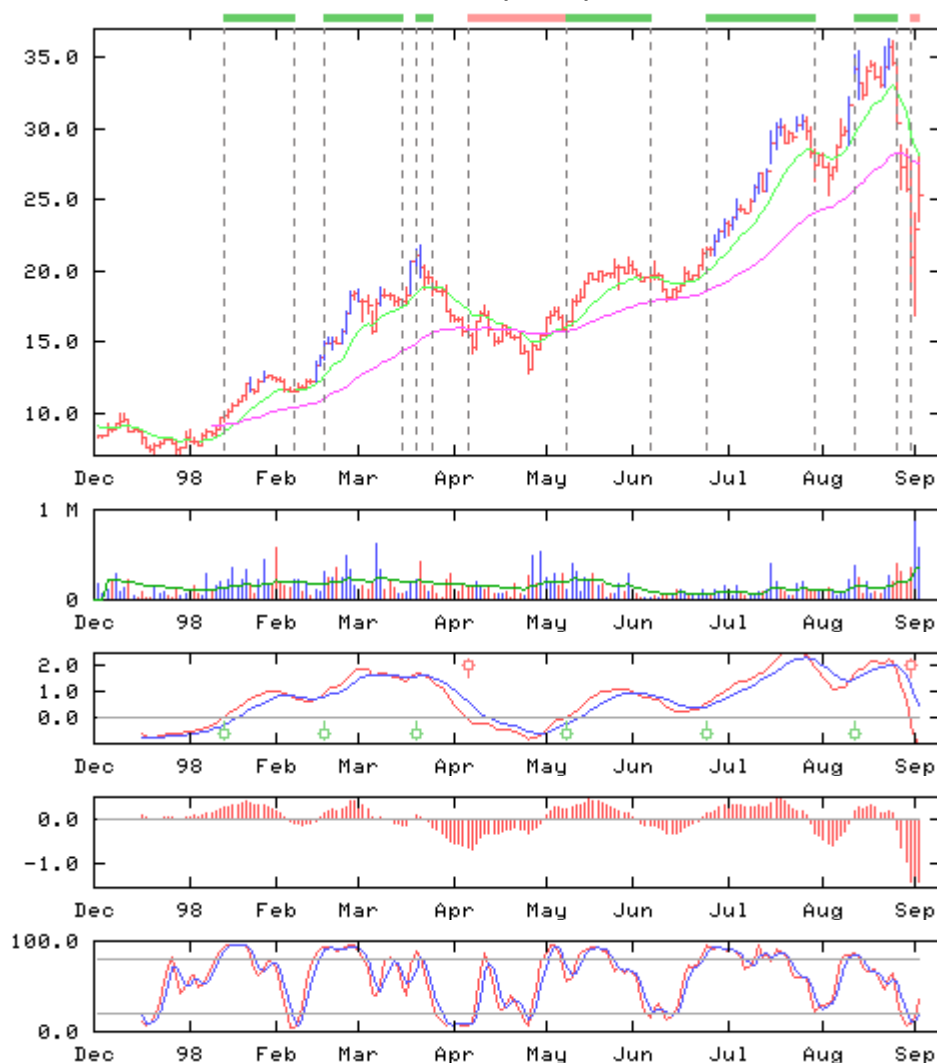
Unstable price action is volatility. Stable price action is trending. The middle ground is oscillation (where profits can still be had, but they are harder to come by). But volatility should be strenuously avoided when you see it.

## Color Coding and Instant Assessment by kensey

Each bar in the volume graph (second from the top) is drawn in one of two colors. Blue is used if a stock's price went up that day, and red is used if the price went down.

This allows for a quick assessment of who is controlling a stock, buyers or sellers.

### Metromedia Fiber Network Inc A (MFNX)



The dominant group moving the stock of MFNX is definitively buyers. The blue volume bars predominate, and stack much higher than the red. This says that when the stock rises, it is being propelled by a much larger crowd of investors.

An important observation to make here is that once the frenetic buying slowed between the run-up in January and mid March, sellers did not unload stock in a real serious way. Most of those who got in during the doubling of the stock apparently have held onto it. Yes, the stock underwent a fairly stiff retracement, but the volume under which it occurred was relatively low and unconvincing. This is made clear by the fact that there are no significant bars drawn in red in the March and April period.

Which brings us to May. Now that the basing period is over, MFNX is entering a very nice uptrend that suggests it may pierce its previously set 52-week high. Volume has picked up considerably as evidenced by the blue bars, and the price bars are nice and tight. Nice and tight price bars indicate a gradual uptrend in which all participants are thinking along similar lines, and it's a conversation that is proceeding with apparent and relative ease.

Avoid volatility. Look for tight price bars accompanied by big volume. Uptrends that persist usually start out on low volatility. If you look back at the January period, it was not volatile. The pickup in volatility that happened in March hinted that a retracement was just around the corner.

## Got the Blues? by kensey

### Arterial Vascular Engineering (AVEI)



The late April volume that drove AVEI is down to a price level where the support line was heavy and did some damage. This period of selling is represented as a relatively high stack of red bars on the volume graph.

Then, in early May, AVEI started to rally. But you'll note that the corresponding stack of blue bars is shorter than the red bars that piled up when this stock was on its way down. This suggests that this reflex rally is relatively weak in nature; it's occurring on lower volume.

When this reflex rally within a bear trend dies out and the selling returns, it will be important to note whether volume once again increases. Stocks that get hit this hard usually retest their lows. This means that prices will probably dip back down to the support line.

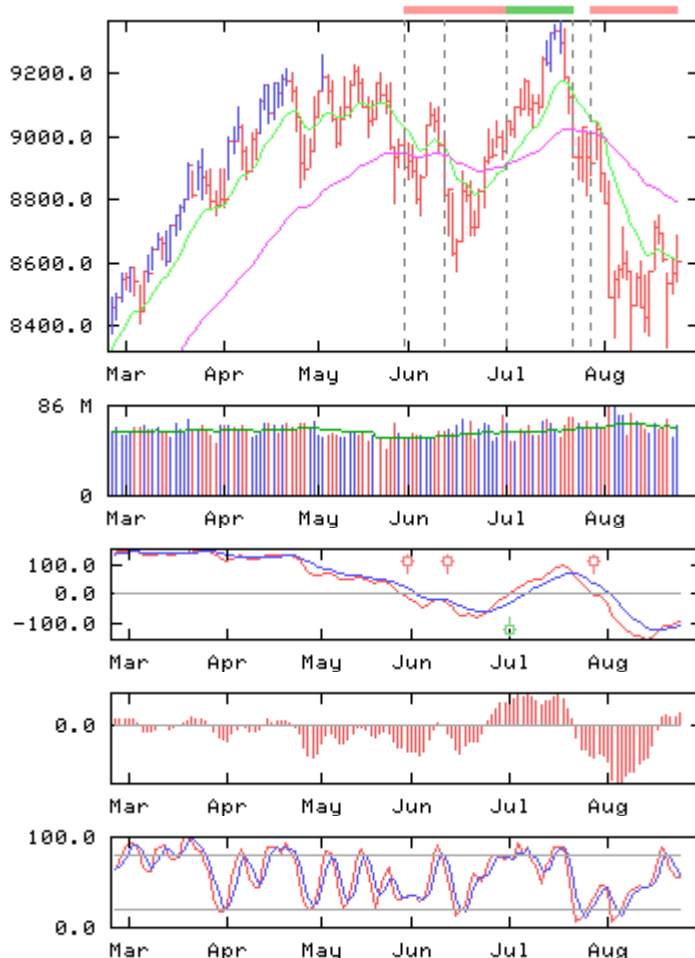
Remember that if the red volume bars stack higher than the preceding blue volume bars it means that Arterial has a shot of breaking through support and it could be a short hop down to 25. (You can tell that my inclination here is to be bearish!)

But, if the retest of support is on weak volume, Arterial would likely bounce off the support line and head toward recovery. Note that the weakness of the MACD lines suggests that there's a long road ahead for this stock.

In any case, this assessment will be possible due to clear color-coding. It's relative height that is most important. If the blues stack higher, that's bullish. If the reds stack higher, that's bearish.

## It Rallies Tomorrow, Right? by kensey

### Dow Jones 30 Industrials (\_INDU)



An assessment of the early May 1998 volume going into the stocks that compose the Dow 30 suggests that the second leg down was weaker than the one that preceded it. This is sort of hard to see, but the 'leg down' is the drop that began on May 1.

If you look at the relative height of the volume bars, the stack of red bars is not only smaller than the blue stack immediately before it, but shorter still than the red stack that first brought the DOW below its 13-day exponential moving average (EMA - drawn in green) for the first time in three months.

So there was less of a punch in the selling than there was last time around. (Good - the market did rally from this point, but it did not get that far.)

Of course, puncturing a moving average that has stood up for three months is kind of ominous. But the volume pattern suggests that not a lot of money is exiting the markets right now (still referring to when this article was first written - May 7).

OK. Let's provide an update - June 1, 1998. The most significant characteristic of the DOW right now is that it looks poised to roll over. If you look at the other market averages on the Diary page, the DOW would be the last one to go (if it does). If the DOW doesn't roll over, then all of this is just a washout of the small caps (the Russell 2000 on the Diary page looks AWFUL) and the DOW is holding. (Go team!)

The fact that the DOW holding up is bullish in my opinion and it's why I currently have a smattering of DOW stocks on my recommend list. I'm probably the only guy in the world who thinks this divergence is bullish, but until the DOW rolls over, I think the crowd that holds DOW stocks (they are conservative, yes?) is holding course. And it means that fund managers are rotating money out of small caps and into big caps. So it's still being put to work.

The strength of the dollar versus the yen is one negative to keep an eye on. This will kick big cap profits in the teeth. If the DOW pierces 140 yen to the dollar - much later - it's going to rain (even though it's summer). But the inflation outlook is the best it's ever been (up one percent over the past year) and the bond market has been strong. These are two very favorable conditions.

What has me scared though is if the 13-day EMA crosses below the 50-day EMA. Again, from the Market Diary page, you can see what kind of carnage was wreaked when the EMA's crossed on the Russel T, then on the Nasdaq Composite and both OEX's.

Anyway, the way I'm playing it is to be short technology and Internet stocks, and long a handful of 'special situations' and some DOW stocks. Long where there is strength, and short where there is weakness (though my DELL short didn't bring on any cheers from the Motley Fool crowd). As time moves on, my short list is growing and my long list is proportionately shrinking.

## Moving Averages: A Definition by kensey

ClearStation uses 13-day and 50-day exponential moving averages (EMA). These are fairly standard values. The 13-day EMA is drawn in light green, and the 50-day EMA is drawn in pink.

### Avid Technology (AVID)



To define what an exponential moving average (EMA) is, it will be helpful first to define a simple moving average (MA). A simple moving average shows the average price over the last  $n$  days:

$$\text{Simple MA} = (P_1 + P_2 + \dots + P_n) / n$$

The problem is that simple moving averages are "jumpy." They respond twice to each piece of data - once when it is added, and again when it drops off. Having the moving average change when a price is removed is a bad thing. When a high price is dropped, the MA will most likely tick down. When a low price is dropped, the MA would probably tick up even if the price went up that day, but by an amount smaller than the value that was dropped. As Elder says, "A simple moving average is like a guard dog that barks twice."

The solution to this unreliable alarm is to use Exponential Moving Averages.

An exponential moving average gives more weight to the latest data and responds faster to changes than does a simple MA. At the same time, EMA does not jump in response to old data being dropped off. Again, as Elder says, "This guard dog has better ears, and it only barks once when someone approaches the house."

$$\text{EMA} = \text{price today} * K + \text{EMA yest} * (1-K)$$

$$\text{where } K = 2 / (N+1)$$

This is a continuous formula: Each day the latest price is factored in, and old data fades towards oblivion, as it should. The older the data, the less importance is attached to it.

Moving averages are useful in that they act as floors when prices are rising. You see how the price graph of AVID hugs the 13-day EMA the whole way up? If a price bar of AVID breaks through the 13-day EMA convincingly, this would suggest that continuation of the uptrend is somewhat in doubt.

## Acting as a Floor Under Prices: ABT by kensey

### Abbott Labs (ABT)



Moving averages are useful because they typically act as floors below prices when they are rising, and as ceilings above prices when they are falling.

The price graph of Abbott Labs illustrates these characteristics. During the MACD green uptrend that occurred between mid January and early March, the 13-day exponential moving averages served as a formidable support line below which prices did not significantly penetrate.

Once the price bars pierced the 13-day exponential moving average in late March, it signaled the arrival of a relatively stiff retracement. During this retracement, which lasted throughout April, the 13-day exponential moving average served as a formidable resistance level, which prices did not penetrate at all.

In mid June, a new MACD green bar was initiated and prices rose once again above the 13-day exponential moving average. As such, this seemed to be the optimal price level at which to try and pick up the stock (if you were so inclined).

## When Not to Chase a Stock by kensey

When a stock is in a strong uptrend, it's easy to fall into the trap of picking it up when it is up a couple of points, before a dip that could provide a better buying opportunity.

Using the 13-day EMA (the green line on the price graph), you can establish a price the stock is likely to gravitate back to, and as a result, determine a more favorable time to buy in.

### Cisco Sys Inc (CSCO)



CSCO has hugged the 13-day EMA tightly during its recent uptrend. Each time it breaks away from that level, the stock seems to navigate its way back. Sellers come in at each staccato burst and take profits in a fairly predictable way.

Eyeball the 13-day EMA, and use that to ballpark the price. You can wait for the stock to fade back to this level, and once it does, schedule your buy order to fire off along with everyone else's.

As I write this in early June, the stock has broken out and closed right at the high of the day. This is a very bullish development indeed.

The 13-day EMA is at approximately 76 dollars a share. I would buy now. There will probably be some follow through tomorrow, but given CSCO's affinity for coming back and touching the 13-day EMA, I would seize this opportunity and place my order.



## Acting as a Floor Under Prices: IBM by kensey

### Intl Business Machines Corp (IBM)



IBM has been in a very strong uptrend, despite the market's relative waffling overall.

As I pen this (May 22), the stock is sitting right on the 13-day EMA, (the green line on the price graph), having come back down to this level in a linear fashion. Interestingly, this occurred after a huge day that brought the stock to a 52-week price high.

It's amazing how often this occurs. A stock has a huge day on big volume, cracks a 52-week price high and appears to be off to the races. Instead, a retracement the next day brings it back to the 13-day EMA, and traders are standing around in the pit scratching their heads in disbelief.

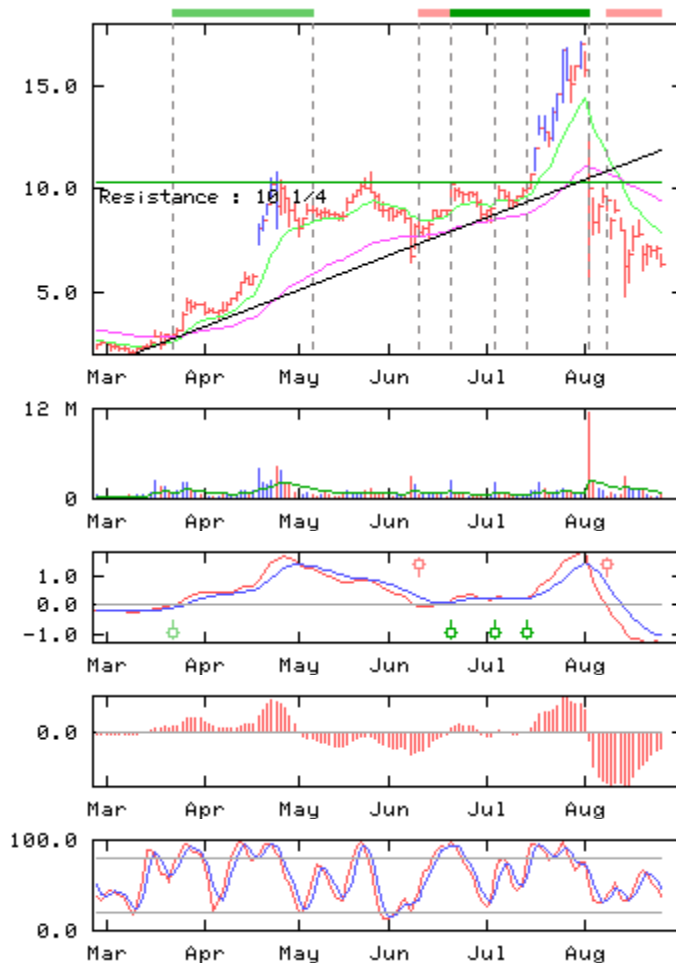
Given the strength that IBM has exhibited in the recent past, I'd look to buy the stock.

However, if IBM cracks and closes beneath the 13-day EMA, this would be a sign of technical weakness, and I would exit immediately. Were I to trade tomorrow, my game plan would be 'if it's up, buy it'.

But if it instead falls back and cuts below the 13-day EMA, I'd close out, get some sunshine, and golf it up. That's my win-win scenario.

## Gravity and EMA 13: TRBD by kensey

### Turbodyne Technologies Inc (TRBD)



This stock had an incredible break out in early July 1998, accompanied by all the good things: volume, a gap, and a real throw-caution-to-the-winds attitude. Such success could make you want to start your own company.

After the breakout, things subsided and gravitated back to the 13-day EMA. The 13-day EMA acts like reality - no matter how heady things become, it beckons and throws cold water on a stock, no matter what the situation.

It pays to wait for the 13-day EMA. Once prices kiss this line, it's time to back up the truck. There is never a need to chase a stock. You can eyeball the price level of the 13-day EMA and know where your entry point is going to be. Especially after a huge runup like this on a fairly obscure and thinly traded stock. If you just can't wait, then nibble. But don't over do it. Leave yourself in a position to react positively to a retracement.

## Acting as a Ceiling Over Prices: CYBX by kensey

### Cyberonics Inc (CYBX)



Ever since CYBX went out of MACD green in mid April, the stock's price has slid 70 percent. This decline has been so linear that the stock never even went into MACD red - the lines never crossed over again after the top. However, this situation will soon be remedied.

The 13-day EMA was barely touched the whole way down. What this tells you is that until a stock crosses back above the 13-day EMA, there is no reason not to hold course (if you were shorting the stock, that is).

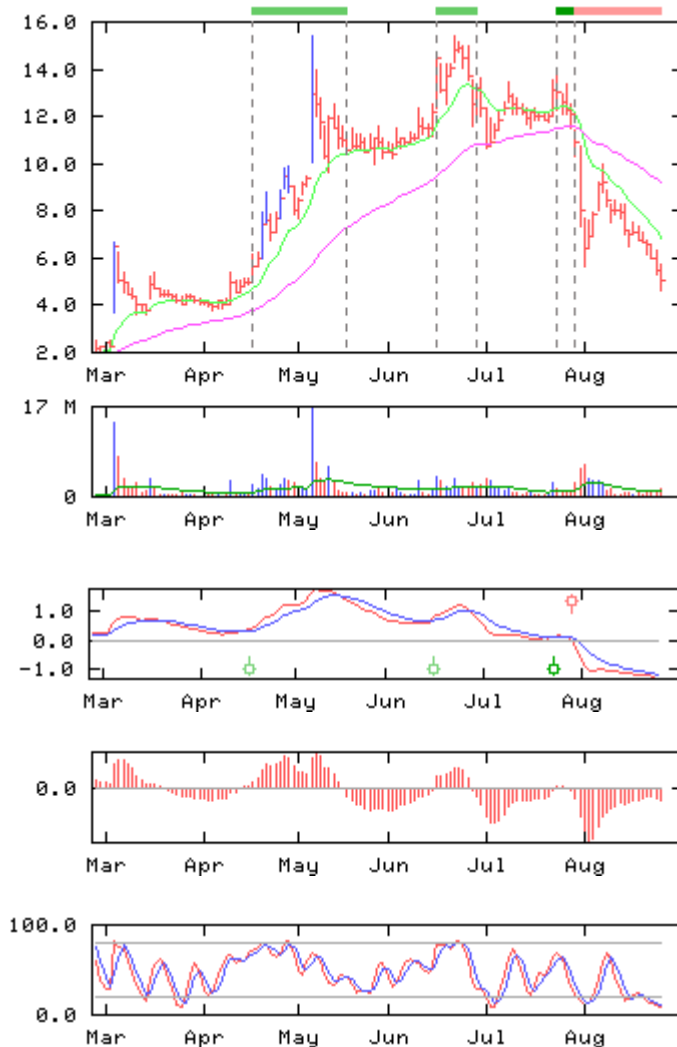
So beware when a stock you own drops below its 13-day EMA! If it's a small cap like CYBX, your risk goes up. When holding untested and volatile small caps, or extremely over-valued Internet stocks, it pays to err on the side of caution, and sell.

Once you've dumped out of a losing stock or a stock that's experienced a loss, forget about it. ClearStation will provide you with ample candidates to choose from. Direct your attention elsewhere.

Later on, go back and look at the losing trade to see what went wrong. By this time, it will be a rewarding experience as the stock will probably be below where it was when you got out. And even if it is higher, who cares? The reason for closing it out was a good one.

## An Amazing Floor Under the Price: GMGC by kensey

### Genl Magic (GMGC)



June 15, 1998

General Magic has technology everyone wants - voice recognition.

General Magic traded for under a buck a share at the beginning of the year, and closed today at around 12 dollars a share. Is this the lomega of 1998? Quite possibly. Since tripling in price in one day on March 1 (from 2 dollars a share to approximately 6), GMGC has hugged the 13-day moving average like it can't get enough of its love. It is **the** defining characteristic of its uptrend.

Especially bullish about the hugging and clinging going on here between GMGC prices and GMGC 13-day EMA, is that it forms a well-rounded cup. This means that as GMGC was basing in the beginning of May, and coming back to the reality of the 13-day EMA, it maintained its upward bias. In other words, the base had an upward bias to it.

Rounded cups are phenomena all unto themselves, but when it is coincident with 13-day EMA hugging, the case is bolstered.

Now (June 15), GMGC is starting to lift off the 13-day EMA. This offers up a chance for others to get a nice hug. An incredibly smooth hump below the centerline of MACD Histogram bespeaks of the gradual grace and lack of volatility of GMGC trade during this recent basing period. The MACD lines should cross tomorrow if there is any follow through on today's bullish action. With any luck, the similarity in MACD from the mid-March to mid-April period, will match what is happening now in the mid-May through mid-June period, with the hope that the mid-June to early-July period will offer similar sized gains of the mid April to early May period.