# Our DCC Controller "Brand-by-Brand" opinion

## Which "controller" brands do we like, what are our "likes and dislikes" about the brands… ...and why?

Now **here** I really am treading on eggs - my opinion is guaranteed to suit only one person perfectly, and that is **me** - but perhaps my own preferences, which evolved based on hands-on experience, **plus** feedback from many happy clients, have value in the same way that other users' opinion is useful.

I cannot review every system here, so forgive me if your choice is missing. However, I have chosen some of the most widely distributed and thrown in a couple that are worthy of note on either positively or negatively for balance.

We stock some of these brands, and not others. However, I won't define which here because I want you to read through this section as neutrally as possible. I'm of course happy to explain in detail to you, quote you and recommend if that's what you would like, but first, **please**, let's go through the thinking process.

**The comment order indicates nothing - they are arranged alphabetically.**

## Bachmann Dynamis:

**Bachmann partnered with ESU for this product, so it could have been a bit special, but the reality is that it is quite clear that it has been designed to a price and unfortunately, the result is, it delivers far less than most expect!**

**I LIKE:** The fact it is wireless at an entry level cost, has full addressing ability and the price point.

**I LIKE:** The ability to use alphanumeric addressing of locomotives.

**I DISLIKE:** The fact that the infra-red is negatively affected by fluorescent tubes, LED lighting and sunlight and it is **far** too directional for all but the smallest layout. For any larger or round the walls layout, it is necessary to mount repeaters for the IR sensors, or everything stops every time the handset loses contact with the base station!

**I DISLIKE:** The fact that it cannot read decoder information as that is important if you want to be able to get the best from DCC. (as with the Roco Maus 2, it is necessary to spend a lot more on a bigger base station to get an important basic feature such as CV read-back, and I think that's wrong).

**I DISLIKE:** Its ergonomics and general shape - and the flimsiness of the joystick control, which is less than precise and takes a lot of getting used to!

Overall, it is very much like a games console controller and needs two hands to hold and operate. The large screen is very good and easy to read, but it (and the IR transmitter) chews up batteries **very** fast.

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## If we now add the Pro Box and IR repeater to the Dynamis...

It becomes a very different product, and is becoming feature compatible with fully fledged systems, so a secondary set of comments are due.

**I LIKE:** The fact that the IR repeater, if mounted where it will give much wider coverage than the original Dynamis IR receiver, gets rid of the "dead spots" that cause layout shutdown and keep communications constant, making the wireless feature work properly for the first time. You'll still need to be careful about lighting though.

**I LIKE:** The fact that reading CVs is now possible

**I LIKE:** The fact that you now have a proper programming track ability

**I LIKE:** The fact that it holds all roster info in the Pro-Box so it's available to all handsets.

**So - I would strongly recommend any existing Dynamis owners to make the upgrade!**

But, to be honest, it still has limitations:

**I DISLIKE:** The limit of only four handsets… other brands offer a much bigger flexibility in that area

As the Dynamis + Pro-Box is now at the cost of a full system from major competitors, if you don't already own a basic Dynamis, then I strongly suggest that it'll pay you to look closely at other "full feature" systems before investing.

## Digitrax:

**An early leader in the USA, and one of the first widely sold brands.**
**Digitrax has a very wide array of systems and accessories.**

Digitrax is also an innovator and they have a good wide cross-section of smaller manufacturers following their lead, so while their loco-net bus is a proprietary way of communication between controller and accessories, it is widely supported. Widely stocked, Digitrax has a wide base of users globally.

**I LIKE:** The "Super Chief Extra" with the DT402 handset, and the excellent value "Zepher Extra" entry-level units. Both ofer good feature levels, greatly improved operability and maintain good expandibility.

**I'M UNSURE ABOUT:** The DT402 handset. It's very clever feature-wise, about the same as an NCE ProCab, but all its buttons are the same size and shape and that makes it look a bit like an electronic porcupine… very confising because there's no visual aid in the shape and no helpful ergonomics in the design… a real same! So: DT402 handset and variants, while technically good, are quite hard to understand for most - so even after many operating sessions, owners are still confused! I know because I help DT402 users more often than any others!

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**I REALLY DISLIKE:** Digitrax manuals - they are famous for inclusion of techno-speak mixed with marketing babble and hype, so they can be a very difficult to read and are often almost unintelligible until one has leaned to "speak Digitrax". Of course, if you are patient and really dig deep in the manuals, you can get used to them… ...but new users often need help or a plain English translation - best provided by either a local user or the excellent Digitrax user group.

**I SORT OF LIKE:** Their willingness to add new features and test the waters with new technology. This is slightly tempered by their lack of cooperation within the industry as I feel it weakens the cross-compatibility of the DCC standards.

**I'M AMBIVALENT ABOUT:** Their warranty approach for decoders. They are fine with control systems, but they can be far less understanding than any of the other major brands when it comes to their decoders, to the point that whilst retail dealers may be more understanding, the Digitrax factory attitude seems to almost say "be careful - we only warrant decoders until they day they are installed".

### ESU "ECoS" System:

**A console-type system. This is "computer operating system" based and is a very good looking unit with twin controllers, full-colour touch screen and many modern features.**

ESU are the makes of super successful sound decoders, the ESU LokSound series, and these are used by many European loco brands, ESU may now be the largest DCC manufacturer world-wide.

This system can be upgraded via the very convenient direct software update facility so it is hard to keep pace with what it can do - it is definitely one for the technophile who likes hi-tech toys and touch screens!

**I LIKE:** Many, many things about this unit, including its ability to record names as well as numbers for loco's, its smart motorised knobs, its touch screen ability, its competent computer-lie operating system etc…

**I LIKE:** The ability to connect it to ethernet to update software via the web. Features and abilities are actively upgraded on a regular bases.

**I LIKE:** The on-screen help - unlike the manuals, this provides good information and is easily accessed, just like the help button on a computer screen.

**I DISLIKE:** The fact it is a console type system. Radio control handsets are available, but be aware that they are also expensive and do not offer total control (some things must still be done via the console).

**I DISLIKE:** The manuals - like Lenz, they are quite badly translated from German to English.

**Take your time looking over ECoS…** and read as much about it as you can, because it is far from a low cost unit and a console system isn't everyone's best choice. However, it is a very, very clever system. If after looking past the fancy panels and design to its real abilities and wide feature level, it clearly fits your need, then don't hesitate… It's a very nice product that is well supported by a manufacturer that we are happy to recommend.

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## HORNBY Digital:

**This brand had a disastrous start to its involvement with DCC and whilst it has gradually become better, we are afraid that to us, it still has a very long way to go before I can recommend it with any confidence. No likes or dislikes here, just a comment on each.**

**HORNBY SELECT:** A train-set controller at best. A definite **no** from us! This was Hornby's first digital controller and is still sold. However, it has significant problems with its digital waveform and should be avoided. It is so far off specification that calling it DCC at all is drawing a long bow!

That's not just my opinion - "Model Eisenbahn" who are one of Europe's most highly respected professional model railway magazines reviewed this product in early 2008. The comprehensive review was in German of course, but there was no mistaking its conclusions, as it was entitled in plain English "Return to Sender".

**HORNBY ELITE:** To be honest - Elite it is **not**! It looks and feels to much like a low cost version of a Fisher Price toy for me… its initial release was greeted with positive anticipation but in its first few software versions, it had significant problems. Giving credit where credit is due, the final versions are NMRA Compliant, and most of the quirks have been taken care of, however the basic design operating structure makes it a really difficult control system to access and use functions on, so it is to be honest simply hopeless with sound equipped locomotives.

**HORNBY E-LINK and RAILMASTER:** The price looked OK and the initial reviews were, as usual from the magazines, made with an eye to the advertising spend, through rosy glasses - so we bought three so we could test. We knew many would leap in and we'd be asked questions. Boxes included a power supply, the E-LINK box and some software - simple. So surely nothing can go wrong?

**Unfortunately it could:** One did not work and another had a bad CD in the box - so not a great start. We persisted and eventually had one working. However, it was not until we found some YouTube videos that we had an easy reference for all of the little "gotchas" that are not covered in the manuals.

**Our conclusion:** An OK introduction to "my first toe-in-the-water" for screen-based control, but limited and **not** very clever. Being browser-based too, graphics are clumsy and there are **far** better out there if computer links and on-screen control is wanted.

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## Lenz:

**I really like the fact that Lenz have been a core part of the establishment of DCC standards, and so respect their products greatly.** The offered an open approach to new development to ensure that Lenz will remain a "flexibly applicable" product with a wide variety of compatible "after-market" or "other brand" accessories to use with it. Whilst they have steadily lost the lead over recent years and have dramatically slowed any new development, Lenz remains a solid, well-made brand. Lenz also makes product for several European hobby brands, as well as Atlas in the USA.

**I DISLIKE:** The Lenz Compact and the Atlas Commander. I feel that for most they are very limited in potential, the "scrolling" needed for selection plus a very limited digital display means that the manuyal is needed all the time and "instinctive" use is difficult.

The same comment applies to the set 90 - the spec reads OK, but whilst the actual use of the hand controller knob is fine for driving locos, as a controller it is really clumsy for function access and all programming operations.

Experience shows that Lenz set 90 buyers almost always end up buying set 100's LH100 handset to make operations easier and both the commander and compact are inevitably destined to be replaced quickly by many purchasers.

**I LIKE:** The Lenz set 100. Mid-priced with excellent feature levels, and a really useable handset that does it all. Few downsides other than the lack of a "knob" on the LH100 handset. Having said that, you may think differently now but based on experience, after a few minutes using the up and down keys, you'll forget a knob was ever an issue in the first place.

**I DISLIKE:** Lenz manuals… these are, to be nice, terribly hard to understand. Tech talk is already hard, and when German technical language is translated into English, it takes several re-readings and clever interpretation to get the point. This really isn't just opinion - I receive far more "please help" requests from Lenz owners than most other brands (with Digitrax a close second!).

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## MRC Prodigy and Variants (branded "Gaugemaster" in the UK):

MRC originally made DC controllers and got into DCC some time ago. Early releases were less than impressive, but the latest software releases for this unit have made it quite a reasonable performer. MRC decoders are another thing altogether, though - less than great, shall we say!

**I LIKE:** The fact that it has followed a similar route design-wise and interface-wise to the NCE system. The controller is fairly easy to use and it is reasonably instinctive, too.

However, whilst it **is** a copy of the NCE style-wise, it is unfortunately not an equivalent product in any way. When we analysed it, it had a somewhat messy wave-form that is far from ideal, with voltage spikes when reverse and some functions were activated.

**I LIKE:** The fact that it does almost everything as it comes, no need for added devices at all - even the power supply is in the box, unusual for a DCC system above "starter" level.

**I DISLIKE:** The fact that whilst they almost copied the shape of the NCE controller, they misread its ergonomics, so it is a two-handed controller.

With just a little more thought, this could have been a much better product. A real shame.

## NCE Power-House Pro and PowerCab Systems:

I think that NCE remains the benchmark for usable sophistication, user-friendly control and most importantly, relaxed DCC operation.

Whilst it looks like it has as many buttons as an average TV or audio-visual system remote control, the control layout is actually very cleverly arranged so that it can be used with only one hand and **all** commonly used buttons are within reach of one finger whether you are right or left-handed.

Additionally, the NCE ProCab (used for both PowerCab and PowerHouse Pro systems) has ability to control the maximum possible 28 separate decoder functions and it also has a really readable super-clear display, plain English approach and logical layout making it a snap to operate with, and even those new to DCC can operate it comfortably within just a few minutes.

The NCE "PowerCab" - a popular DCC "starter controller".

It may look complex, but it really is easy and comfortable to use whether you are 7 or 70!

PowerCab has an excellent feature set And it can Be expanded From its initial 1.5 To 5 amps and more easily. This makes it one of The best start Set choices

These buttons are Used to drive and control & they are directly under your thumb, whether you're right or left handed!

The other buttons are used to select locos, address, tune or to adjust them as well as to set up / operate DCC Accessories etc.

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**I LOVE:** The PowerCab starter set: The NCE "PowerCab" is without doubt the best DCC starter set ever made - all the functions of a full PowerHouse Pro system and for less than half the price! It is upgradable to a full system easily, too!

**I LIKE:** The easy-to-read manual. There are still a few areas where interpreting "tech-speak" is hard. However, in general, a basic, logical approach and the constant help from the "plain English" programming and screen information makes NCE a pleasure to use and learn, whether the user is 7 or 70+.

**I LIKE:** The fact that for all basic programming, you can forget CVs and simply make "yes-no" decisions… "Do you want to enable DC operation? ENTER for NO, press 1 for YES. Is forward normal or reversed for this loco? ENTER for normal, press 1 for REVERSED etc… dead easy - no interpretation needed!

**I LIKE:** The full "2-way radio" option, that means total wireless for all operations and programming. It works just like it is plugged in with no delay, has excellent range and can do everything without plugging it in to the layout. **No** other brand offers such competent wireless performance.

**I LIKE:** The "owner upgradable" main processor. NCE releases occasional updates and this means an NCE owner can always have the "latest" product and functions, by simply replacing the "brain" of the unit.

**I DISLIKE:** Nothing much at all about the NCE system, but it would be nice if they look at adding a little "21st century" to the visual display - it's time for more modern graphics!

NCE have also manufactured various accessories - one of which is their very clever "Mini-Panel" which simply plugs in as if it were another handset, and has the abilitya to add lots of layout automation through very simple on screen programming with an NCE handset from either PowerCab or PowerHouse Pro.

This low cost item will let you add loco-by-loco or accessory-by-accessory specific automation tasks so that things like starting shuttle control or route-setting becomes super-simple!

If you need more than a single mini-panel can do, you can just as easily add more of them onto the system!

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## Roco LokMaus:

**It is a "train-set" brand, but it is about the best of them, and in reality has matured to become a nice control system. I've included them because they're widely distributed and have kept a sensible cross-compatibility with standards.**

Roco pricing is generally good, making them a popular choice among modellers as a "starter pack" or second handset controller for Lenz. Be careful though, there are several versions and the basic "Maus" very commonly seen on e-bay at tempting prices is not always what you think!

**I LIKE:** The "Maus" - it has some nice features and is nice to hold and use. Overall a very much more useful device than its predecessors!

**I LIKE:** The new radio option - slick and very well priced, it is a very nice option that is unaffordable in many brands for the average modeller!

**I LIKE:** Some of the newer generation Roco DCC products, but for the life of me cannot understand why they didn't make it possible to read back information from the decoder with them at all levels instead of requiring the add-ons / amplifiers to do so… it sounds like a small thing, but not being able to read back makes programming much harder, especially for the novice.

Reading back a decoder CV's current settings before you change them can be quite important!

**I QUITE LIKE:** The Roco "Action Items" such as the coach with opening doors and sound, the excellent ROCO DCC controlled crane and similar - these add excitement and demonstrate potential directly, stimulating the future of DCC.

## ROCO Z21:

**We do LIKE the Z21**: In the box is a power supply, base station and a D-Link router, ready to connect too your computer system, wirelessly. It has some nice features and nicely developed very "current level" screen graphics with a nice on-screen "skin" that makes touch-screen use easy. It also interfaces very well with standard Roco control systems.

**It DOES have some issues:** Earlier firmware versions had issues with accessory address compatibility, but this was resolved in the latest update, so things are improving. We DO like it well enough to offer it for sale - and not all products achieve that success!

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## Zimo:

**A definite Rolls-Royce both price and feature-wise! It is extremely well-made and does everything it claims to do very well - which is quite a lot as it is a very sophisticate DCC system**.

If I was to change from my own favourite at any time, this would make my shortlist!

**I LIKE:** Most things about the architecture and software approach of this system. It is really well designed in every way.

**I LIKE:** Zimo's positive approach to evolving new things and in approaching things in different ways, whilst all the time remaining 100% NMRA compatible.

**I DISLIKE:** The price. Whilst it is clearly a quality product, I can't help feeling it is more expensive than it needs to be. To be fair, its development costs are high compared to most as Zimo keeps evolving new things and those costs need paying for, but money is money to most modellers and it **is** expensive!

## ZTC:

**Originally a really nice, somewhat special system designed in the UK, with a nice design, look and feel.**

Sadly, this brand slips further and further behind reality in the DCC world and is now technically far behind the pack, less than great in performance and well and truly overpriced.

Since I originally wrote this article, ZTC closed for business, passed on its stock to a third party who attempted to keep the brand going, but failed to do so.

However, having had to help many ZTC owners through many, many problems that should never have happened over the years, I have to say that whilst I admire their courage and I wish every ZTC user success, I am sorry - a simple "**not at any price**" still remains my opinion here.

ZTC should, at the moment, occupy the same place on your shortlist as Z does in the alphabet...

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## So: How to evaluate a controller for your needs?

In the end it is <u>your</u> choice, and any decision needs to be based on <u>your</u> needs. Here's my idea for a logical and sensible bit of research before you open up your wallet.

**FIRST**: Read the next few articles in the advice section of our website, and bed firmly in your mind that it is **not** the feature list that is important…

What really matters is whether your choice will do the **few very important things** that **you** want it to do… ...and, that it fits with **your** expectations and feels **right** in your hand! (Most competent systems will control more locomotives and do more things than you can shake a stick at anyway).

**THEN**: Above all, keep it fun - whatever you do. I've seen so much agonizing about the DCC decision process that I'm sure some will never be happy because they are forever second guessing or juggling feature lists!

It's what it can **do** for **you**, not how long the list is that's important - unnecessary features are only useless clutter.

**REMEMBER: When asking others what is best, they will <u>always</u> recommend their own choice above all - that doesn't make it right of course, nor does it make them wrong - it is just human nature.**

**RELAX and ENJOY**: First and foremost, don't worry as you go through this one step at a time - take it slowly and don't be afraid to ask questions. This is an important step - but do keep in mind that there is no reason not to enjoy the process of thinking and talking it through… ...and choosing your system!

You will soon forget that, unless you keep in your mind that it's not a life-threatening issue…

Do remember you are choosing how to **improve your model railway operations** - not planning a trip to the tax office, dentist or proctologist. The decision process can be a pleasant journey of discovery if you follow the few simple guidelines in the next couple of articles here… and ask if you need advice or help!

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