

Ten steps towards a great DCC decision

As we've already tried hard to explain, all DCC systems are NOT created equal!

It's my experience that many "leap before they look" when it comes to DCC – there is so much that can be done with DCC that individual unit shortcomings are lost in a sea of functions and other marketing claims so they can't be evaluated or judged... or be seen to be missing, and the owner ends up disappointed.

To avoid this, you first need to establish what is REALLY important to YOU!

So... do try to work through the list below – it is more "Dreaming" or "Armchair modelling" than hard work, and will at least make sure you really did think it through before opening your wallet.

(It's a short process but take your time – only ten steps, with the odd one or two worth repeating until you're SURE. There is no particular order for these items – but DO take all steps at least once before reaching for the wallet or credit card)

STEP ONE

Just for now, forget the budget all together and focus on planning and concept!

No, I'm not silly - nor do I imagine you all have a "bottomless wallet". It's just that to make a good decision you need to first establish what a DCC system must do for you long term to warrant a change to DCC or be worth ANY money at all.

Once you've gone through a bit of planning and assembled a basic "want" and "Must Do" list, then, and only then, can you start looking at brands, identifying things that are important from the HUGE feature lists, and therefore "zeroing in" on individual models and purchase issues.

You see, DCC is like many things in life – While DCC loco's still run on DC, you can't make "half" a control system change, and making a decision without forethought may result in a purchase that doesn't do QUITE what you hoped or aspired to – and that often results in 100% disappointment!

STEP TWO

Think about how you use or want to use your railway... Forget how you've always done it, and start thinking about how you COULD do it or WOULD do it if anything was possible or dreams could come true. "Think outside the square" if you can!

Again, I know that this is a BIG ask, but think of it this way.

Compared to a normal DC control system, DCC opens up theoretically limitless opportunity to "do it better". Things that are practically impossible in DC are everyday issues with DCC, but you do NOT know yet what these benefits may be. SO – open your mind a bit before "narrow choice" by looking too closely at "specifics".

Write a couple of lists – One titled "MUST DO" and the other "WOULD BE GREAT IF IT COULD DO". Don't be shy – let your mind wander and aspire to something special.

GO on – start writing – re-read it tomorrow then add to it, remove items that aren't really what U want or tear it up and re-do it until you're satisfied. But DO it!

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STEP THREE

Think about the "environmental" factors that affect your operations... location, social issues, layout size, the layout theme and its operating requirements to match prototype actions.

Don't forget the stuff you would LIKE to be able to do and add to your activity on the layout...

Please – for a while, also try to FORGET "Brand comparisons and Window shopping".... At least for now, and apart from a bit of research to separate fact from fiction, just spend time THINKING about what you want to do with your railway. In this process, brand manuals are your enemy, not your friend!

Then - Our objective is to define the BENEFITS of potential DCC systems and work out the questions you may need to ask when looking around – plus of course to clarify needs in practical terms in our own minds.

So - Make ANOTHER list – this time divide the page in half, leaving the right hand column empty as we'll add comments later when we start qualifying or thoughts. Make the list as honest as you can be with yourself – keep it about "Real stuff". (Potential points of comparison that may result from your list are shown with < > below each question)

FOR EXAMPLE

Am I a social modeller, or will I usually operate alone?

Q = < controller needs to be easy to learn if guest operators will be invited >

Do I need a "crew" to use the layout to its full potential?

Q = < Need to be able to plug in several handsets >< Need to use handhelds at varying positions or maybe go wireless >

Will I be exhibiting my layout / attending shows with it?

Q = < versatile, wireless? > < easy for new operators to learn > < robust >

Will I be visiting my club, and does it have DCC available?

Q= < what brand do they use and why >

Will I be running lots of trains at once, or will there only be one or two "in steam" or running at any one time?

Q= < easy swap between loco's > < clear screen info > < easy handling of several trains >

Do I want to spend lots of time switching or shunting wagons?

Q = < adjustable yard/mainline mode > < easy speed curve or programming of acceleration > < knob or buttons >

Do I like just sitting and watching, or would I like to be able to "follow" each train to its destination?

Q= < hand-set not console > < easy connection of spare handsets > < wireless >

Do I want to be able to operate "on-board" functions in my loco's like lighting, smoke units or sound systems?

Q= < full keyboard needed > < easy access to function buttons >

Do I like the idea of interfacing my railway with a computer for automation of route control or operations?

Q= < Serial connector on main unit > < accessory interface >

Will I want to be able to control accessories like signalling, points and other things?

Q= < full keypad preferable > < Easy "macro's" for route selection >

Is consisting, double heading or use of banking engines important to me?

Q= < simple and advanced consisting > < programming on the main > < Easy access to a controller "memory stack" for swapping loco's under control >

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STEP FOUR

Wait a few days. Ideas mature like wine – some get better with age, some do not.

(in the meantime, use this time do some research, find out what you can about who uses what, which dealers stock what, and get in touch with local modellers to try and find a layout that you can "try" DCC on). DO make a real effort to talk to as many "DCC involved" people as you can.

STEP FIVE

Take another look at the lists and modify them – you'll have eliminated a few ideas as not needed – and maybe thought of others to be added! This will possibly result in deletion or change to some items from the list in step 2, and addition of new items or "qualifying needs" to list/step 3

STEP SIX

Take the lists and use them as a guide - write a short "story" to yourself. Yes that sounds silly but it works and aids thought developments. Don't be self-conscious – it DOES help.

Make the first half an overview of your modelling intention, and what you hope to be able to do and achieve with your layout.

Imagine you are writing the basis for an article in your favourite magazine. This part is easy for some... hard for others.

The second half takes a little thought - Make the second half a description of a typical operating session NOT restricted by the limits of normal DC operation.

In other words, think up and try to describe scenarios and possibilities, and describe each train action. Detail is GOOD. Don't be self-conscious – only YOU will read it.

Example:

I'm on station duty...A slight turn of the knob and the loco backs gently onto the train and waits... at the push of a button the Loco's reverse lighting becomes headlights and nose markers illuminate to indicate an express passenger train.

Another button and coach lights come on, while at the rear, the marker lamps on the last coach are set.

Two simple presses and Points/Turnouts move smoothly to clear the path.

As the signal, triggered by the turnout action, turns to green the burble of the motors turns to a roar, couplers clank as they take up the slack, the locomotive the whistle screeches, and the Locomotive cautiously takes the weight of the train.

The train eases from the platform and leaves the first short curve. The squeal of flanges dies and the roar of the loco is replaced with a softer rumble as it gently accelerates to running speed.

John, operating with controller #2, keys the loco number & takes control at the push of a button.

I return my attention to platform 3, where the locomotive on station pilot duty is just arriving to remove coaches left by the incoming "night mail" train... etc...

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So what's the point of all this?

Well, think about it in "Operating model" terms...We've just described a loco with excellent slow running (assisted by a good quality DCC decoder) that keeps loco's moving at slow speed, lights in loco and carriages controlled by function switches on the DCC handset and turnout/point control & signalling also DCC switched.

Of course, the sound decoder in the loco accounts for that realistic sound profile, and pre-set speed and back EMF and acceleration curves custom tuned within each locomotives decoder to each loco takes care of the gentle acceleration!

Simple keypad presses then let you take control of the next loco by just selecting it from the pre-set "stack" in your controller memory with a simple press of a button!

It might sound dumb but it is worth doing this exercise if you can...if you can't write, then sit back and imagine it, just writing down the "features" that might be needed to accomplish the scenario.

Take notes – the "actions" in your scenario are "benefits of DCC" - these become qualifiers for the "features" you will need to have when it comes to selecting the unit you choose!

DO ALL THIS AND YOU WILL HAVE A GOOD CHANCE OF KNOWING WHAT YOU WANT TO ACHIEVE WITH YOUR DCC SYSTEM.... And this will really help when we get to the part when we open the wallet!

STEP SEVEN

Compare the "scenarios" in step six with the lists from steps 2 & 3 (most importantly step 3).

Make sure you understand what's needed to DO each action by asking questions of others – E-groups are very helpful here.... NOW – and only now, is it time to start looking at the various brands.

Look at your list and see if a brand you are looking at can REALLY do what you want. Here are some easily missed or misunderstood key things to think about when you look at what a unit can do:

A – is it easy to use?

Some brands and models make commands happen by simple keypad, others take a button-plus-scroll approach that can be frustrating if you use functions like lighting often.

(If you like to be a "hands-on" person then I STRONGLY RECOMMEND you eliminate all control units that use a "button plus knob twist" to access functions)

B – Is it easily expandable?

Some brands let you add another controller handset easily without any compromises. (If a brand fails this test, drop it)

C – Can it handle 4 digit addresses?

Some earlier brands of controller, and many "train-set brand" basic systems only allow 2-digit addressing. (If a brand / model cannot address 4-digit locomotive numbers, drop it).

(This is NOT an issue of how many loco's can be remembered – it is an issue about how many loco numbers YOU or your friends can easily remember, and having the cab-side number as the controller # for that loco just makes good sense, as it is logical, simple and foolproof)

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D – Can it program "on the main?"

Some smaller issues are best handled on the main line – adjusting acceleration and deceleration, consisting, changing light control functionality etc.... (If a controller does NOT support programming on the main, you WILL regret it later, so drop it from consideration NOW).

E – Does it fit my hand comfortably – is it instinctive to use?

Some controllers are so easy that you'll soon be operating without actually looking at the keyboard – others are like trying to use an unfamiliar calculator – frustrating! (Ask existing users about this, and try the "feel" of each brand if you can – it's really important)

STEP EIGHT

OK - make a brand "shortlist" and ask specifically about each of them. Dig DEEP, play with each if you can. Ask important things twice!

One dealer or one user is NOT a good enough reference. Try to get as wide an input as you can, and ask WHY each chose their brand, and what they like and dislike about it. Remember every owner is an "evangelist" for his own set and will praise it heavily yet merely murmur about shortcomings.

Don't disagree with them – just listen and question them - but discount the good things 50%, and double the questioning of every negative.

Ask CLUBS and club members, E-groups for DCC and DCC brands (E-me for contact data if you need it). Ask individuals and of course ask local retailers –but be warned, most retailers know little about DCC, and will invariably recommend the brand with the highest profitability.

STEP NINE

It is time to go shopping at last!

By now, you should have a pretty good idea which function will give which results, and know what is necessary for a DCC unit to be able to meet your aspirations. BE SPECIFIC – write a final "must have" shortlist and a "spec and feature list" for what you want, and either get sensible, specific responses to every one of them or insist the dealer answer EVERY question to your satisfaction. If he cares, he will.

(Remember that often dealers substitute price for service and discount resellers often know zip about what they sell...

WARNING: A cheap item is no substitute for one that does the job in the way it should, and a compromise for the sake of price is ZERO gain for a lifetime "discount" on the level of pleasure you will receive. Shop with the experts only!

STEP TEN

BUY THE BEST YOU CAN AFFORD... (NO, I'm NOT just ignoring your budget!)

It's just MUCH Better to wait a while and buy the BEST control system early on, because it's cheaper than replacing a "compromise" later. If needed, go slower on chipping locomotives – or sell the odd loco to buy a better control unit.

Eventually, the WHOLE SYSTEM COST will make the difference between a quality control system and an entry level one relatively insignificant...but if you compromise, it is probably forever!

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Conclusions and summary....

I hope the above, as silly as it might seem in parts, is of use to you.

I know this "think-plan-check" method works because it's the sum of MANY individual answers to MANY individual questions.

But...If you need more – just email or call ... We're all different after all!

I promise you sincere, accurate and above all honest answers. If I don't know, I'll say so and either refer you to someone who does – or do some research and find out what you want to know.

I've had customers that made quick decisions based on solid advice... and I've spent up to a year answering questions to cautious clients before they've bought...

And... I've spent more hours than I care to remember helping those who were foolish enough to leap in unprepared, based on limited knowledge or the attraction of a "buy now or miss out" offer.

However I answer every question as well as I can, whether I stock and sell the brands concerned or not.

I've NEVER had a client or correspondent regret following solid advice, and I accept that no matter how much help I give, I will not always "get the business" because I'm not able to be all things to all people.

However, that's fine too, because I enjoy my business and I always try to answer as a fellow modeller, not as a retailer.

Do get in touch, any way you prefer... I'll be glad to help where I can.

Richard Johnson

DCCconcepts Pty Ltd

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**Need more information? There is LOTS more useful stuff on our website  
at [www.dccconcepts.com](http://www.dccconcepts.com)**

**OR**

**Just call us on 08 9437 2470 or email us at  
[questions@dccconcepts.com](mailto:questions@dccconcepts.com) for a quick, honest, simple answer!**