Equinox 800 Programs – Derek McLennan

The following programs are optimised for UK and (hopefully) European field systems, which can be highly contaminated with iron and coke, as well as being salty or mineralised from ancient habitation and other environmental factors. They may however work equally as well in similar detecting environments located outside the UK and Europe – you would have to try them and see.

A few pointers you should try to remember:

- Have fun with your new Equinox, as it is only metal detecting after all.
- Always perform a Noise Cancel before operating the Equinox in the field.
- Please remember that if you change modes or search profiles within modes, you must perform a separate Noise Cancel in the mode or profile that you have changed to. The Noise Cancel feature is local to both the mode and the profile you are operating within.
- The above tip is also exactly the same for Ground Balance, if you change mode or profile while searching, you will also need to perform another Ground Balance in the new mode or profile.
- You should also be able to use these programs within Field Mode 2 and also Park Modes 1 & 2, albeit they are not optimised for these modes. However, with slight adjustment, you should be able to get the best out of the programs in those modes, should it be necessary.
- You should be able to change frequency within any of these programs and they should behave roughly the same, albeit they are not optimised for any single frequency, only multi-frequency and as such a change into any single frequency may reflect on the specific capabilities of these multi-frequency programs.
- If you read and understand the Equinox user manual, you will find that you can easily modify any of these programs in the field, thus customising them for your detecting environment and site.
- As a general rule, if you want more depth then lower the Recovery Speed and Iron Bias as much as possible, even to the minimum (Do not do this if your site is NOT relatively clear of iron) and increase the sensitivity as high as you can go, even if the machine 'chatters' a little.
- Finally, you should always remember that if you are really not sure about any target, then:

"IF in Doubt, Dig it Out!"

So, that is about it, although I should put in the caveat that I have had very little time on the final retail software platform, as it was not locked until fairly late in development, albeit the last few updates were simply fine tuning only. However, I have gained immense experience throughout the development and I am confident in the abilities of these programs, but I am not claiming they will be the best for you, nor any better than any other persons. I am sure anyone using the Equinox for a decent period of time, will quickly be able to optimise them even more and really push the machine to its limits – All the best, good luck and happy hunting from Scotland!!

Slàinte

Derek

Tommy Gun

Detect Mode: Field 1
Ground Balance: 0
All-Metal (Horseshoe): On
Frequency: Multi
Volume Adjust: 20+ (Depending on your hearing)
Tone Volume: T1=4, T2=25
Sensitivity: 22+/- (Depending on your search environment)
Recovery Speed: 6+
Iron Bias: 3-5 (Average 4 and adjust in field)
Target Tones: 2
Tone Pitch: T1=1, T2=20
Threshold Level: 8-12 (To suit your ears)
Threshold Pitch: 1
Discrimination Break accept/reject: None (All Metal)
Tone Break: T1=2

This program will allow you to search in iron / coke infested areas and should get hammered coins at 0-8+ inches. The non-ferrous tones will be high and really pop. The iron tone is low and in the background hammering away like a Tommy Gun if a lot of it is present in the ground. It has great target separation and if you work any possible iron target that just gives a high tone blip (even one way), using the cross and wiggling technique and it should help you understand if you are being potentially fooled by circular or large iron – you will hear the iron Tommy Gun low tone, but the high tone signal should clean up and become more solid if the target is good – The TID numbers should also stabilise more than jumping around. You can also use the frequency change technique by Gordon Heritage to help decide if your potential target is iron. Dig every high tone until you understand and trust the TID numbers for identifying targets on your site.

Tommy Gun 2

Detect Mode: Field 1
Ground Balance: 0
All-Metal (Horseshoe): On
Frequency: Multi
Volume Adjust: 20+ (Depending on your hearing)
Tone Volume: T1=0, T2=25
Sensitivity: 16-20+ (Depending on your search environment)
Recovery Speed: 6+
Iron Bias: 3-5 (Average 4 and adjust up in field for a quieter experience)
Target Tones: 2
Tone Pitch: T1=1, T2=20
Threshold Level: 0-8 (Depending if you want total quiet or not)
Threshold Pitch: 1
Discrimination Break accept/reject: None (All Metal)
Tone Break: T1=2

This program is very quiet and will allow you to search in iron / coke infested areas and should get hammered coins at 0-8+ inches. The non-ferrous tones will be high and really pop. The iron tone is muted and you will not hear the Tommy Gun low tone in the background. It has great target separation and if you work any possible non-ferrous target that just gives a high tone blip, using the cross and wiggling technique, it should help you understand if you are being potentially fooled by circular or large iron, if the high tone signal cleans up and becomes more solid if the target is good – The TID numbers should also stabilise more than jumping around. You can also use the frequency change technique by Gordon Heritage to help decide if your potential target is iron. Dig every high tone until you understand and trust the TID numbers for identifying targets on your site.

Toad

Detect Mode: Field 1
Ground Balance: 0
All-Metal (Horseshoe): On
Frequency: Multi
Volume Adjust: 20+ (Depending on your hearing)
Tone Volume: T1=3, T2=25, T3=15, T4=12, T5=8
Sensitivity: 22+/- (Depending on your search environment)
Recovery Speed: 6+
Iron Bias: 3-5 (Average 4 and adjust in field)
Target Tones: 5
Tone Pitch: T1=25, T2=4, T3=6, T4=12, T5=18
Threshold Level: 8-12 (To suit your ears)
Threshold Pitch: 1
Discrimination Break accept/reject: None (All Metal)
Tone Break: T1=4, T2=20, T3=26, T4=34

This program is much quieter than Tommy Gun and has non-ferrous targets as low tones and iron as a jingling high tone. It is more optimised for smaller non-ferrous targets (quarter stater, full stater, Roman coins, cut quarters, cut halves, hammered coins and smaller milled). It will also hear the larger milled and hammered coinage. It will allow you to search in iron / coke infested areas and should get hammered coins at 0-8+ inches. The non-ferrous tones will be low and the frog will really bark at you on a good target. The iron tone is quiet and high pitched and you will hear it jingling in the background if a lot of it is present. It has great target separation and if you work any possible iron target that just gives a slight Toad blip (even one way), use the cross and wiggling technique and it should help you understand if you are being potentially fooled by circular or large iron – you will hear the iron jingling, but the Toad signal should clean up and become more solid if the target is good – The TID numbers should also stabilise more than jumping around.. You can also use the frequency change technique by Gordon Heritage to help decide if your potential target is definitely iron. Dig every Toad low tone until you understand and trust the TID numbers for identifying targets on your site.

Toad 2

Detect Mode: Field 1
Ground Balance: 0
All-Metal (Horseshoe): On
Frequency: Multi
Volume Adjust: 20+ (Depending on your hearing)
Tone Volume: T1=0, T2=25, T3=15, T4=8, T5=4
Sensitivity: 16-20+ (Depending on your search environment)
Recovery Speed: 6+
Iron Bias: 3-5 (Average 4 and adjust up in field for a quieter experience)
Target Tones: 5
Tone Pitch: T1=25, T2=4, T3=6, T4=12, T5=18
Threshold Level: 0-8 (Depending if you want total quiet or not)
Threshold Pitch: 1
Discrimination Break accept/reject: None (All Metal)
Tone Break: T1=4, T2=20, T3=26, T4=34

This program is very quiet and has non-ferrous targets as low tones and iron as a high tone. It is more optimised for smaller non-ferrous targets (quarter stater, full stater, Roman coins, cut quarters, cut halves, hammered coins and smaller milled). It will also hear the larger milled and hammered coinage. It will allow you to search in iron / coke infested areas and should get hammered coins at 0-8+ inches. The non-ferrous tones will be low and the frog will really bark at you on a good target. The iron tone is muted so you will not hear it jingling in the background. It has great target separation and if you work any possible iron target that just gives a slight Toad blip, use the cross and wiggling technique and it should help you understand if you are being potentially fooled by circular or large iron – you will hear the iron tingling, but the Toad signal should clean up and become more solid if the target is good – The TID numbers should also stabilise more than jumping around.. You can also use the frequency change technique by Gordon Heritage to help decide if your potential target is definitely iron. Dig every Toad low tone until you understand and trust the TID numbers for identifying targets on your site.

Electrify

Detect Mode: Field 1
Ground Balance: 0
All-Metal (Horseshoe): On
Frequency: Multi
Volume Adjust: 20+ (Depending on your hearing)
Tone Volume: T1=3, T2=25, T3=15, T4=4, T5=8
Sensitivity: 16-20+/- (Depending on your search environment & EMI)
Recovery Speed: 6+
Iron Bias: 3-5 (Average 4 and adjust in field)
Target Tones: 5
Tone Pitch: T1=25, T2=4, T3=6, T4=20, T5=15
Threshold Level: 8-12 (To suit your ears)
Threshold Pitch: 1
Discrimination Break accept/reject: None (All Metal)
Tone Break: T1=4, T2=20, T3=25, T4=32

This program is similar to the Toad using five tones and has non-ferrous targets as low tones and iron as a jingling high tone. It was designed to help eliminate any EMI that may be caused specifically by electric fencing. For other sources of EMI, (e.g. pylons, railway lines, mobile telephone masts, etc.) you should be able to use the noise cancel feature with any other program and that should eliminate any EMI you may be experiencing. Also, try adjusting the Noise Cancel setting manually, after an auto Noise Cancel has been performed, as this can help eliminate EMI. If however EMI is still heard, you may want to give this program a try. Also note that by changing out of Multi-Frequency in any particular mode into the higher single frequencies 20kHz & 40kHz, you should be able to eliminate any persistent EMI you cannot get rid of by using any other method. Note - a change into any single frequency may reflect on the specific capabilities of these multi-frequency programs. This program is also more optimised for smaller non-ferrous targets (quarter stater, full stater, Roman coins, cut quarters, cut halves, hammered coins and smaller milled). It will also hear the larger milled and hammered coinage. Note – some milled coinage may fall within the T4 Tone Break zone and as the volume of this zone is set low, you will have to listen for them. I would advise taking a test coin with you to check if this program is suitable for the type of larger milled coinage you may be searching for. This all metal program will allow you to search in iron / coke infested areas and should get hammered coins at 0-8+ inches. The non-ferrous tones will be low and will grunt at you on a good target. The iron tone is quiet and high pitched and you will hear it jingling in the background if a lot of iron is present in the ground. It has great target separation and if you work any possible iron target that just gives a slight grunt (even one way), use the cross and wiggling technique and it should help you understand if you are being potentially fooled by circular or large iron – you will hear the iron jingling, but the grunt of a non-ferrous signal should clean up and become more solid if the target is good – The TID numbers should also become more stabilised rather than jumping around. Dig every low grunt tone until you understand and trust the TID numbers for identifying targets on your site.

Electrify 2

Detect Mode: Field 1
Ground Balance: 0
All-Metal (Horseshoe): On
Frequency: Multi
Volume Adjust: 20+ (Depending on your hearing)
Tone Volume: T1=0, T2=25, T3=15, T4=4, T5=8
Sensitivity: 16-20+/- (Depending on your search environment & EMI)
Recovery Speed: 6+
Iron Bias: 3-5 (Average 4 and adjust up in field for a quieter experience)
Target Tones: 5
Tone Pitch: T1=25, T2=4, T3=6, T4=20, T5=15
Threshold Level: 0-8 (Depending if you want total quiet or not)
Threshold Pitch: 1
Discrimination Break accept/reject: None (All Metal)
Tone Break: T1=4, T2=20, T3=25, T4=32

This program is exactly the same as Electrify, except it has the Iron Tone Volume T1 set at 0 and the threshold can be set at level 0 to 8, depending if you want total quiet or not. If the EMI persists, then you could try to narrow down which TID numbers are being directly affected and alter the Tone Break setting in T2 & T3 to try to eliminate it (e.g. You could try raising the T2 zone to 25 and the T3 zone to 29 and it may eliminate the interference from an electric fence). If this helps reduce any interference, but you still do not want to hear any interference at all, then you could lower the Tone Volume of T3 down to 0 and this may stop you hearing it altogether. Note – by reducing any Tone Volume zone to zero, apart from the Iron Tone Volume zone T1, then you run the risk of missing some good targets (e.g. larger milled and hammered coinage and also some artefacts falling into the T3 TID number zone). On a plus, you will still hear smaller non-ferrous targets (quarter stater, full stater, Roman coins, cut quarters, cut halves, hammered coins and smaller milled coins).

Digger

Detect Mode: Field 1
Ground Balance: 0
All-Metal (Horseshoe): On
Frequency: Multi
Volume Adjust: 20+ (Depending on your hearing)
Tone Volume: T1=4, T2=25
Sensitivity: 22+ (Depending on your search environment)
Recovery Speed: 1-4
Iron Bias: 0-4+ (Depending on your search environment and any iron present)
Target Tones: 2
Tone Pitch: T1=1, T2=20
Threshold Level: 8-12 (To suit your ears)
Threshold Pitch: 1
Discrimination Break accept/reject: None (All Metal)
Tone Break: T1=2

This program is very similar to Tommy Gun, except for Recovery Speed and Iron Bias. It should be used for searching clean pasture and should punch deep into the ground for any non-ferrous targets large or small, depending on any mineralisation present in the ground (Mineralisation will reduce depth). The non-ferrous tones will be high and really pop. The iron tone is low and in the background any is present in the ground. If you hear a lot of grunts similar to using the Tommy Gun program, then your field is full of iron and you should either change program or increase your recovery speed to a minimum of 5 and adjust your Iron Bias setting to 4. The Digger standard program without any adjustment is for clean pasture and has okay target separation, but you have to reduce your sweep speed when searching. If you hear any iron target, which is also giving a high tone blip (even one way), then use the cross and wiggling technique and it should help you understand if you are being potentially fooled by circular or large iron. This is more difficult to discern than if you are using the Tommy Gun program, but the high tone signal should still clean up and become more solid if the target is good and the TID numbers should also be more stable rather than jumping around. You can also use the frequency change technique by Gordon Heritage to help decide if your potential target is iron. Dig every high tone until you understand and trust the TID numbers for identifying targets on your site.

Digger 2

Detect Mode: Field 1
Ground Balance: 0
All-Metal (Horseshoe): On
Frequency: Multi
Volume Adjust: 20+ (Depending on your hearing)
Tone Volume: T1=0, T2=25
Sensitivity: 22+ (Depending on your search environment)
Recovery Speed: 1-4
Iron Bias: 0-4+ (Depending on your search environment and any iron present)
Target Tones: 2
Tone Pitch: T1=1, T2=20
Threshold Level: 8-12 (To suit your ears)
Threshold Pitch: 1
Discrimination Break accept/reject: None (All Metal)
Tone Break: T1=2

Using the same program as Digger, but adjust the Tone Volume position T1 to zero and you should eliminate any iron responses while still detecting in All Metal. This simple adjustment should enable you to hear every non-ferrous high tone, with no iron grunts.

Bullseye

Detect Mode: Field 1
Ground Balance: 0
All-Metal (Horseshoe): On
Frequency: Multi
Volume Adjust: 20+ (Depending on your hearing)
Tone Volume: T1=3, T2=25, T3=15, T4=15, T5=8
Sensitivity: 22+/- (Depending on your search environment)
Recovery Speed: 1-4
Iron Bias: 0-4+ (Depending on your search environment and any iron present)
Target Tones: 5
Tone Pitch: T1=25, T2=4, T3=6, T4=8, T5=15
Threshold Level: 8-12 (To suit your ears)
Threshold Pitch: 1
Discrimination Break accept/reject: None (All Metal)
Tone Break: T1=4, T2=20, T3=26, T4=34

This program is very similar to Digger apart from it operates with 5 tones and is slightly more tuned in the non-ferrous TID range. It should be used for searching clean pasture and should punch deep into the ground for any non-ferrous targets large or small, depending on any mineralisation present in the ground (Mineralisation will reduce depth). It is more optimised for smaller non-ferrous targets (quarter stater, full stater, Roman coins, cut quarters, cut halves, hammered coins and smaller milled), but it will also hear the larger milled and hammered coinage. The non-ferrous tones will be low and will grunt at you on a good target. The iron tone is quiet and high pitched and you will hear it jingling in the background if a lot of iron is present in the ground, which there shouldn't be if you are using this program. If you hear a lot of jingling high tones similar to using the Toad program, then your field is full of iron and you should either change program or increase your recovery speed to a minimum of 5 and adjust your Iron Bias setting to 4. The Bullseye standard program without any adjustment is for clean pasture and has okay target separation, but you have to reduce your sweep speed when searching. If you hear any iron target, which is also giving a low tone grunt (even one way), then use the cross and wiggling technique and it should help you understand if you are being potentially fooled by circular or large iron. This is more difficult to discern than if you are using the Toad program, but the high tone signal should still clean up and become more solid if the target is good – The TID numbers should also stabilise more rather than jumping around.. You can also use the frequency change technique by Gordon Heritage to help decide if your potential target is iron. Dig every low tone until you understand and trust the TID numbers for identifying targets on your site.

Bullseye 2

Detect Mode: Field 1
Ground Balance: 0
All-Metal (Horseshoe): On
Frequency: Multi
Volume Adjust: 20+ (Depending on your hearing)
Tone Volume: T1=0, T2=25, T3=15, T4=15, T5=8
Sensitivity: 22+/- (Depending on your search environment)
Recovery Speed: 1-4
Iron Bias: 0-4+ (Depending on your search environment and any iron present)
Target Tones: 5
Tone Pitch: T1=25, T2=4, T3=6, T4=8, T5=15
Threshold Level: 8-12 (To suit your ears)
Threshold Pitch: 1
Discrimination Break accept/reject: None (All Metal)
Tone Break: T1=4, T2=20, T3=26, T4=34

Using the same program as above, but adjust the Tone Volume position T1 to zero and you should eliminate any iron responses while still detecting in All Metal. This simple adjustment should enable you to hear every non-ferrous low grunt, with no iron high tone.