Cassette Deck 2

ADS C3
Cupwise Nebula Programs

General Information

This is an interesting cassette deck. It was designed by a German company called Braun (and sold under that name there), but in the US it was sold under the ADS brand. A unique, compact, and very clever design, the C3 has a tray that slides out which the tape is placed in- like many cd players. The tape can then be played, even with the tray still out. This design allowed the C3 to take up less vertical space, and gives it a sleek appearance.

What really sets the deck apart from most though, is its ability to play and record at double speed. Looking at the many decks offered by numerous companies in the heyday of cassette, decks that could do double speed were few and far between. Some people believe that Phillips (who held the patents for the cassette, and was also behind the emerging CD format) discouraged manufacturers from building double speed capable decks, fearing they might interfere/compete with the CD. It probably wouldn't have caught on because a tape lasts half as long, but there IS a very noticeable improvement in sound quality over single speed.

At single speed, the performance from this deck would be like any decent deck. At double speed some specs start approaching the reel format (and in some ways best the consumer end reel decks I've had). The graphs in this manual show that the high end surpasses 20khz, and the bass extends down below 20hz! One characteristic feature of this deck is the bump in the high end, which often gives it a fairly 'bright' sound, depending on the tape used. This makes the deck less accurate to the source in those cases, but it provides a nice variety of results for use in this Nebula library!

A variety of tapes were used, with some of the more well known tapes from big name brands, and some more obscure tapes. Most were NOS, and not previously recorded on. Tapes of types I, II, III, and IV were used. Type III's are fairly rare (they were kind of a failed experiment back in the early 80's), and many decks don't even have an EQ setting for them. The C3 does, so I bought a couple to use with it. Double speed was the focus, but some tapes were also sampled at single speed.

There are also skins for both N3 and N4, made by Max!!

Installation

Just copy the .n2p files to your Nebula 'Programs' folder, and the .n2v files to the 'Vectors' folder.

Don't hesitate to contact me at tw@cupwise.com for support with the set! For skin install, look at the skin install manual included in the install .zips.

Organization

All effects will be found in the 'TPE' category, then the 'C39' (for 96khz) or 'C34' (for 44khz) subcategories. The tapes are numbered 1-14 (then one additional called 'X'). Most tapes were used twice and some 3 times, making 'A', 'B', and 'C' effects. The higher quality double speed (3 ¾ IPS) was a priority, so the 'A' effects were always sampled with it (and so were any tapes that only got one program). The 'B' and 'C' effects were sometimes sampled at single speed (1 7/8 IPS). The 'A' effects were sampled with either Dolby B noise reduction, or none. The 'B' effects used B, C, or none ('C' effects always used Dolby B). With this deck, the tape type EQ isn't set automatically. The user must manually select between types I, II, III, and IV to match the tape. The 'A' effects always used the matching EQ for the tape being used, but the 'B' and 'C' effects often used one of the other EQ presets (not matched correctly to the tape), to provide various tonal shaping. In a few cases, the 'B' effect also used the MPX filter. So the 'A' effects usually have fuller high-end frequency responses and the 'B' and 'C' effects are usually more filtered sounding (but not always!).

Use

These are dynamic effects, meaning the result changes depending on the level of sound going in. The 'trim' control gives you quick control over this. It adjusts the input of the sound going in, and automatically compensates for the output level, so all you hear is the change in the effect at the different levels. Be careful not to adjust it too fast (instantly), which can result in loud-ish bursts. As you increase the input drive and begin getting tape compression/saturation, the usual result with most of the programs is that the high end frequencies get more compressed than the rest. So with increased drive, you not only get some tape compression, but also a darker sound usually. Conversely, if you lower the input level, the sound opens up and becomes brighter. I believe there are one or two exceptions.

The 'release' control is provided so you have some ability to shape the dynamic behavior you get. Setting it faster will give you something more instant, like with real tape. Slower settings allow you to smooth-out changes in the sound that happen too fast. 'Dist' allows you to directly adjust the volume level of the sampled distortion/harmonics. You shouldn't expect to ever get anything like crunchy tape distortion by abusing this, because for one thing none of the programs were sampled at that high of a level to produce that kind of result anyway, and second Nebula isn't really capable of reproducing it. But it is a nice control to have. I actually sometimes find myself using it to **lower** the harmonics level, when I'm driving a program into compression, to get a cleaner, yet compressed and filtered sound.

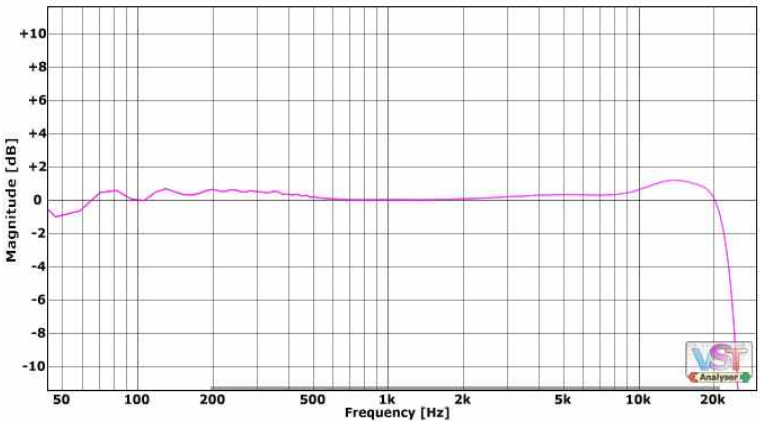
Graphs

The following graphs can be useful if you have a specific need regarding the frequency response. The results change dynamically, so these graphs really only show you what you'll get with lower levels of input drive. From there, as you boost the input more, you'll usually get more high frequency roll-off than you see in these graphs.

VCI 90 (type I, NOS)

1A

One of my favorites in this set, 1A was made at double speed, with Dolby B NR. It gives you one of the flattest responses in the library when using lower amounts of input drive.



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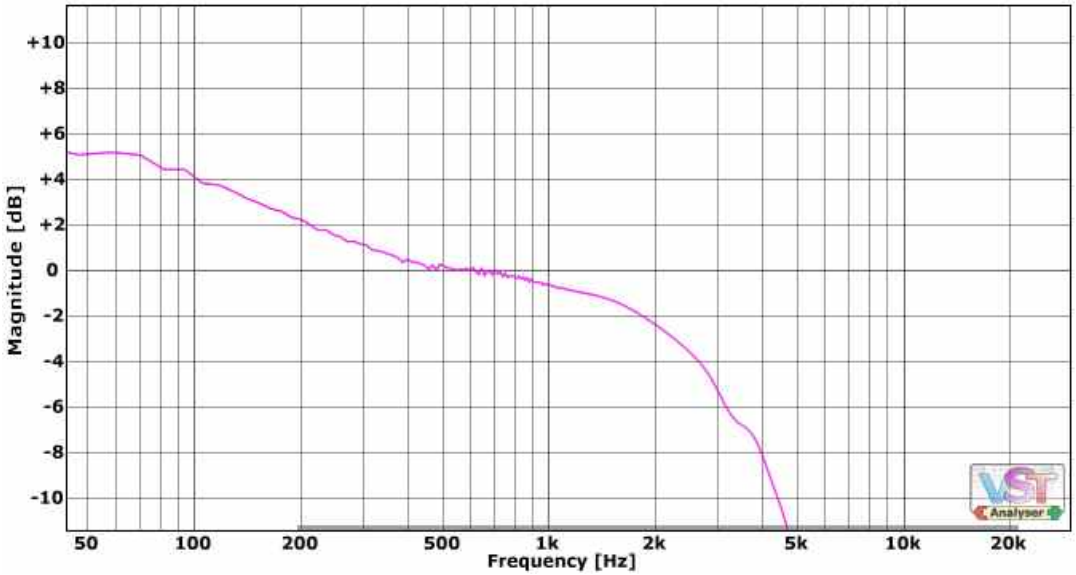
1B

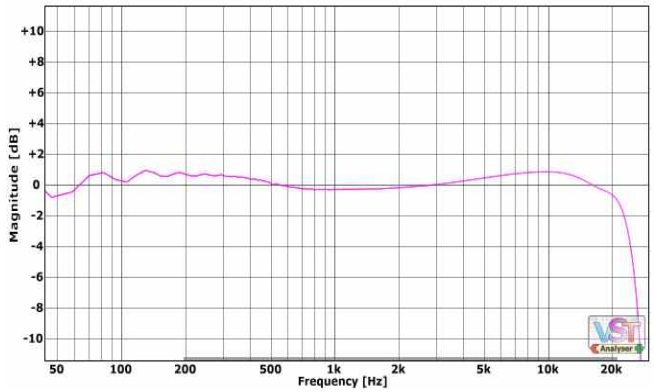
Single speed, Dolby C, type 4 tape EQ (unmatched) was used, as was the MPX filter (meant for use when recording from a radio broadcast). Very filtered and bassy.



Mr. Audio SF C90 (type I, NOS)

2A

Dolby B, double speed. Another cheap tape, but even cheap type 1 tapes perform really well on this deck in double speed mode. Another fairly flat response.



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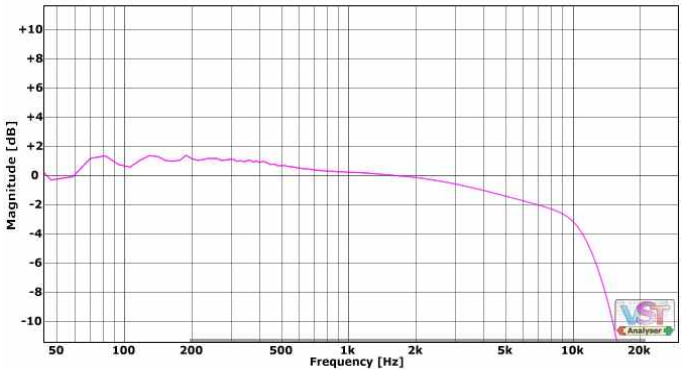
2B

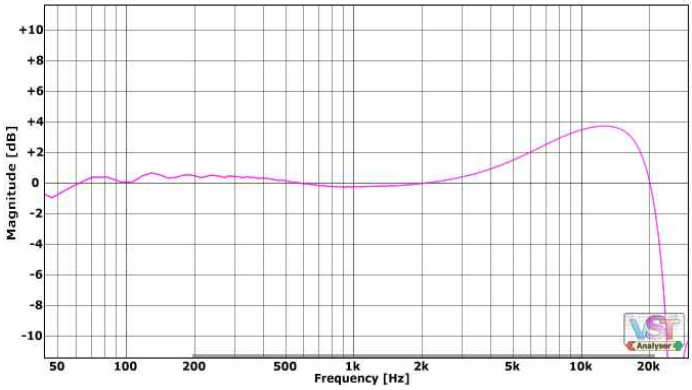
Double speed, no Dolby NR, type II tape EQ selected (unmatched).



Maxell UR (type I, NOS)

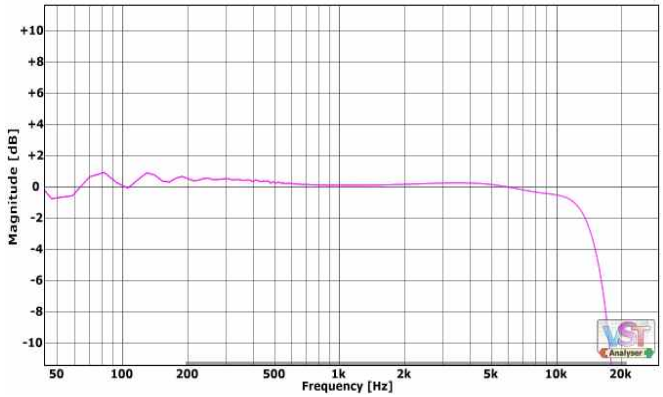
3A

This one was done at double speed, with no Dolby NR.



3B

Double speed, Dolby C, type III EQ (unmatched), MPX filter.



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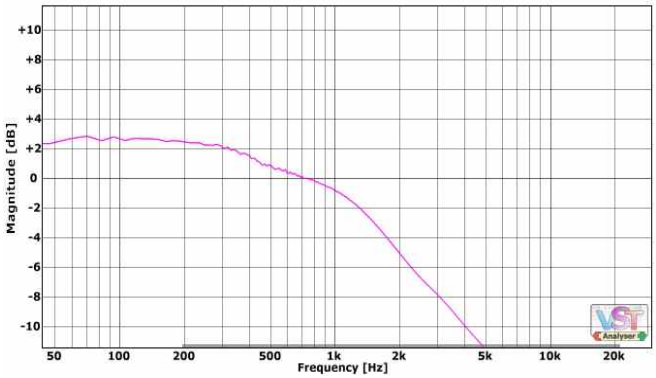
3C

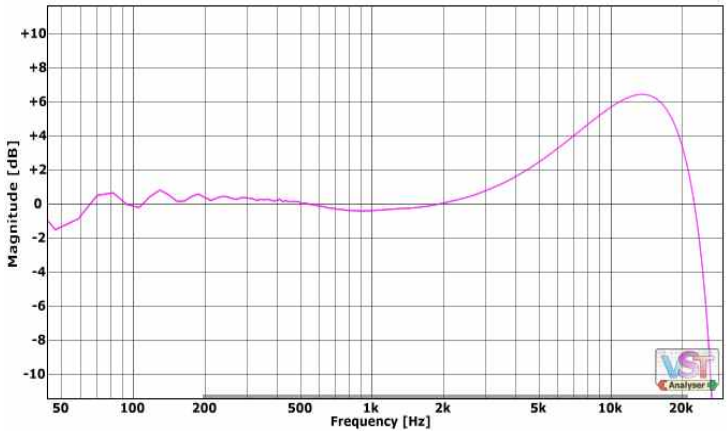
Single speed, type II EQ (unmatched), Dolby B.



TDK D90 (type I, NOS)

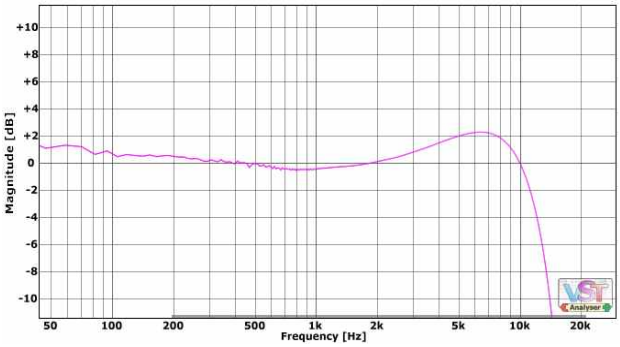
4A

This effect was sampled at double speed, with Dolby B, and type I EQ. Notice the significant upward ramp in the high end. At higher levels, this actually gets squashed back down, becoming flatter and then actually filtered.



4B

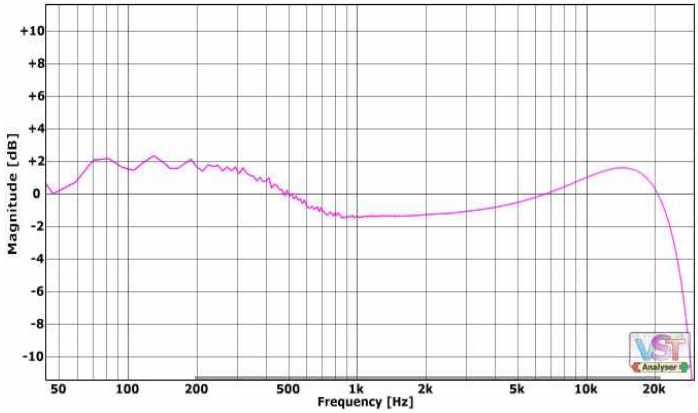
Single speed, no NR, matched EQ.



BASF CR-E 90 (type II, NOS)

5A

The first type II in the set. Double speed, Dolby B.



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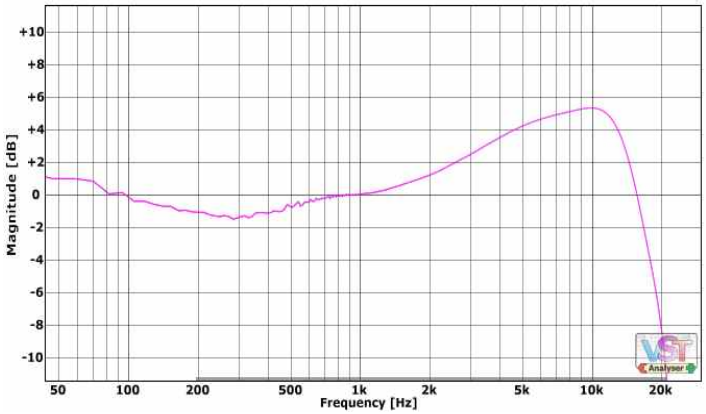
5B

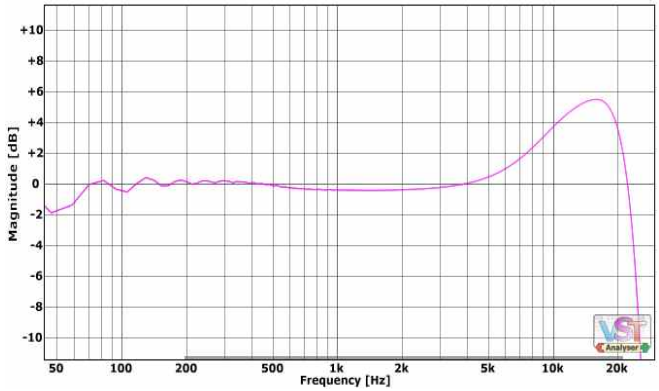
Single speed, type III EQ (unmatched), single speed.



Maxell XL II (type II, NOS)

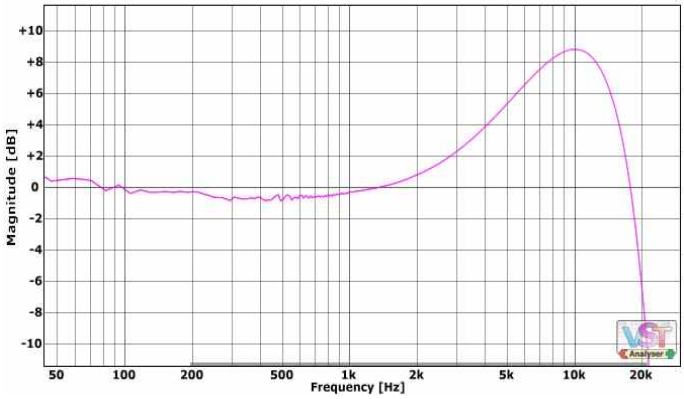
6A

Double speed, no Dolby.



6B

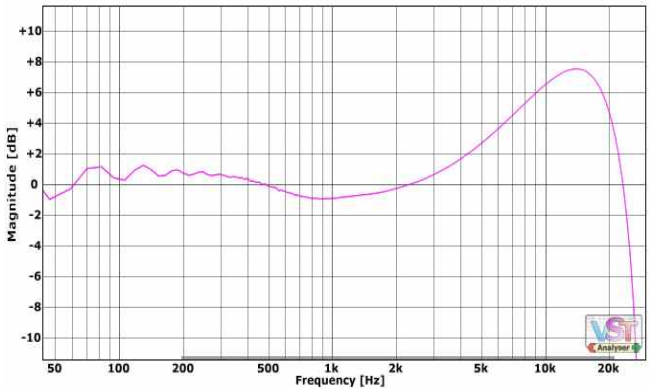
Single speed, Dolby B, type I EQ (unmatched), MPX filter.



Scotch XS II (type II, NOS)

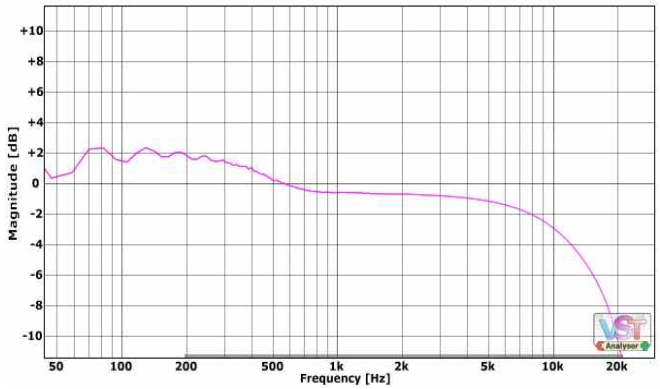
7A

Dolby B, double speed, type II EQ.



7B

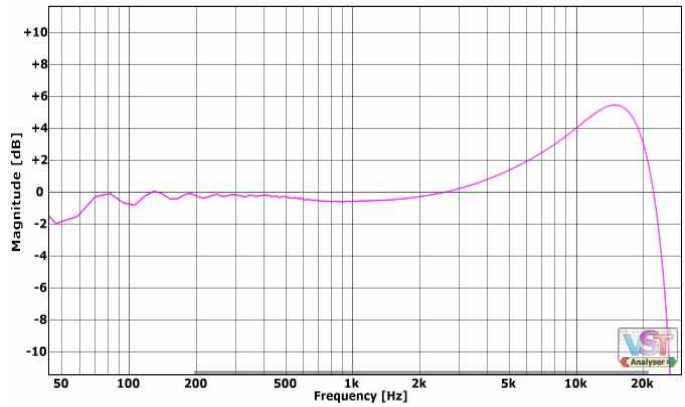
No Dolby, double speed, type IV EQ (unmatched).



Denon HD8 (type II, NOS)

8A

These tapes are highly regarded. Double speed, no Dolby.



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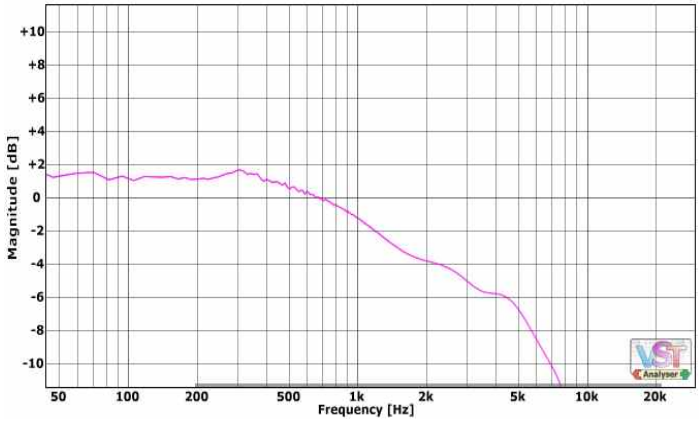
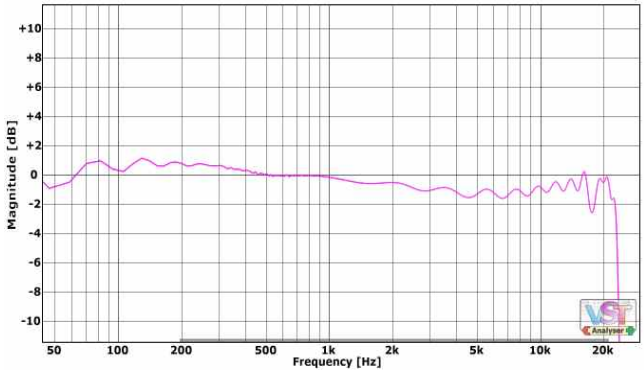
8B

Single speed, Dolby C, type IV EQ (unmatched).



8C

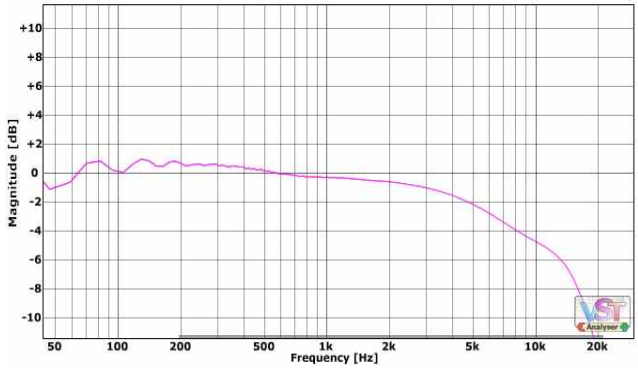
Double speed, Dolby B, matched tape EQ setting.



Scotch Master III (type III, NOS)

9A

There weren't many type III tapes made, because the formula was kind of a failed experiment which was shoved aside once type IV metal tapes came out. Not many decks even have an EQ setting for them (this one does!). Type III tapes were supposed to be an improvement on the type II's, which is probably why this particular tape was packaged like a studio-worthy thing. They turned out to be not so good, and in my personal experience don't even live up to decent type I's for accurate reproduction across the frequency spectrum. For the purpose of Nebula effects, they're great! 9A was sampled at double speed, no NR.



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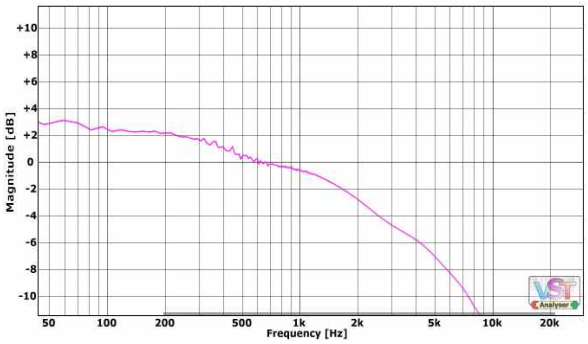
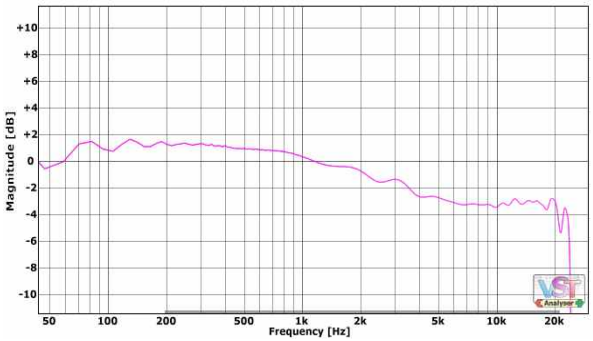
9B

Single speed, no Dolby, type II EQ (unmatched). I was lucky to score a set of 4 of these tapes, they're pretty rare and old.



9C

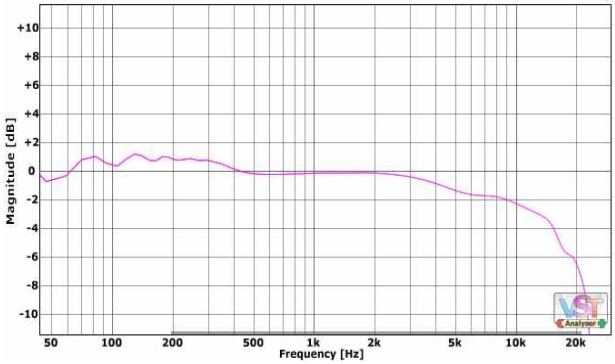
Dolby B, double speed, type I EQ (unmatched).



Sony FeCr 90 (type III, NOS)

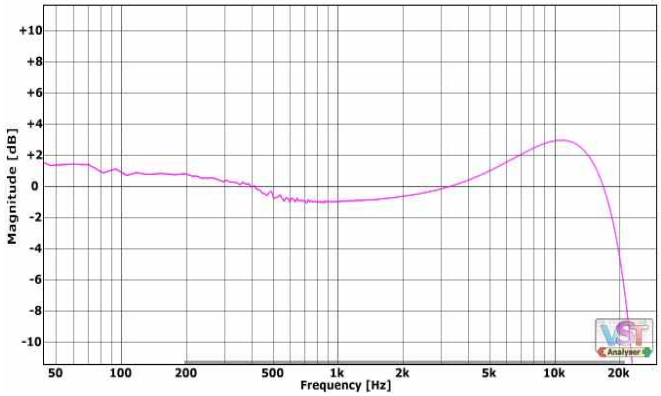
10A

These tapes seem to be the most commonly available (at online auction sites) type III's. They don't seem to be any better or worse than the Scotch tapes. 10A was sampled at double speed, no NR.



10B

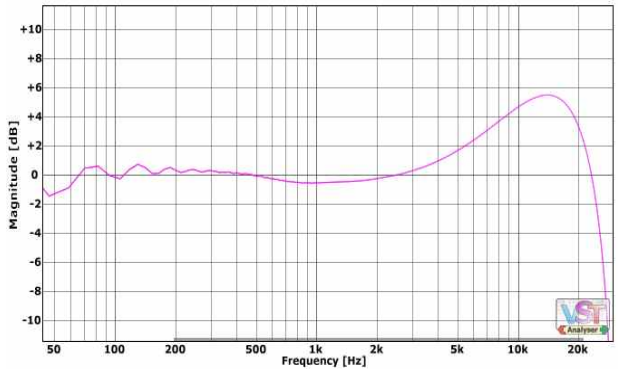
Single speed, type I EQ, Dolby B. The J-card suggests using type I EQ setting for players that don't have a type III preset. Frequency response actually seems a little better than using the type III setting.



Axia K Metal (type IV, NOS)

11A

The first metal tape of the set. 11A was sampled at double speed, with no NR.



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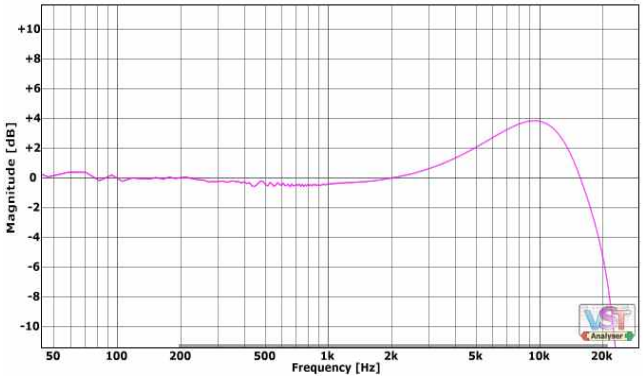
11B

Dolby C, single speed, matched EQ.

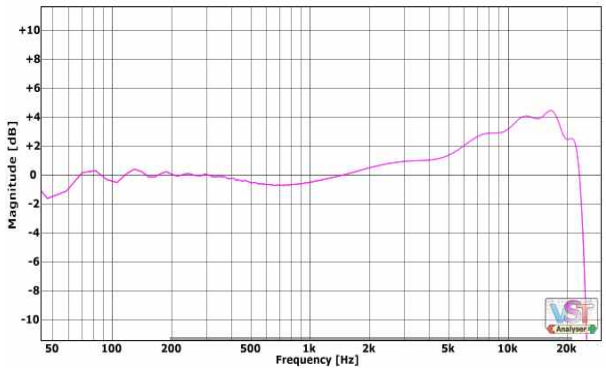


Sony Metal CDix (type IV, NOS)

12A

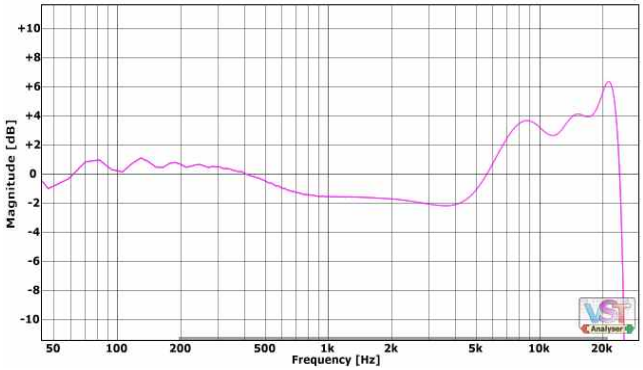
Sony made what is considered by many to be the best cassette of all, the Super Metal Master. It is/was certainly one of the most expensive. This is not that tape. This one is pretty good, though.

12A was sampled at double speed, no NR.



12B

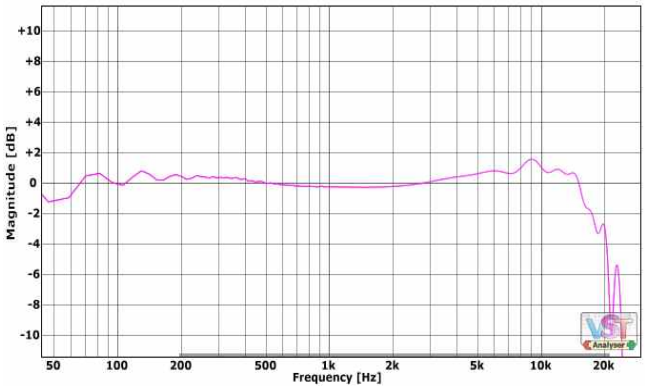
Dolby B, double speed, type II EQ (unmatched).



Maxell MX-S (type IV, used)

13

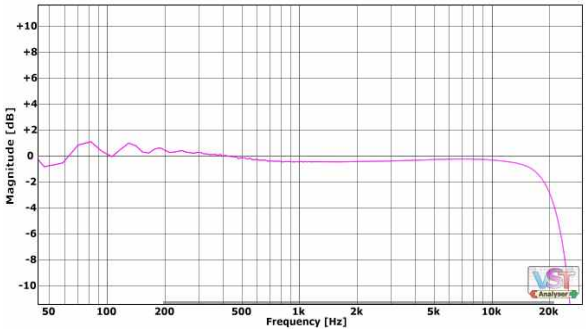
This tape was used for Cassette Deck 1, and re-used here. These are really nice tapes. Sampled at double speed, no NR, and matched EQ. If you want some very nice tape sound with little change to frequency content, try this one!



Memorex Ciré IV (type IV, used)

14

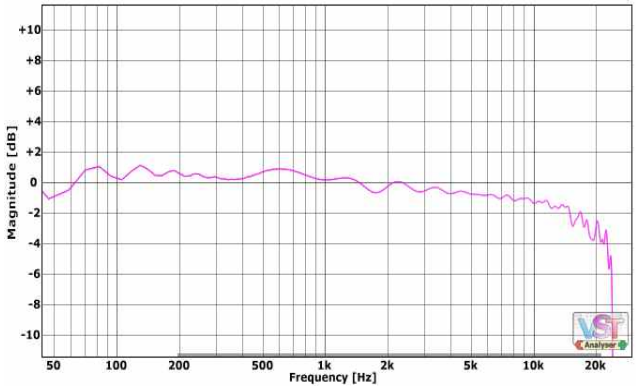
Another tape that was re-used from Cassette Deck 1. Another fairly flat response. I love the early 90's graphic style on the tape shell. Sadly, these tapes are pretty rare. Sampled at double speed, no NR, type IV EQ.



TDK MA (type IV, used)

15

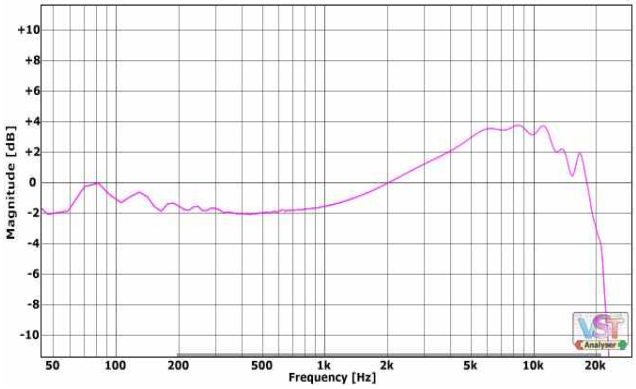
Also re-used from Cassette Deck 1. Double speed, no Dolby, type IV EQ. Sampled with Lynx Aurora 8.



Generic Mystery Tape (type I, probably used)

X

I just found this tape in my closet. It looks like one probably meant for old answering machines from that bygone era. I don't know why I had it. I didn't check to see if anything was recorded on it. I decided to do something a little different with this one too. The sampling tones were first processed in various ways with some vst saturation plug-ins, before being ran to tape. It was sampled at double speed, with Dolby C, and type I EQ.



General Usage Tips/Ideas:

- Make sure to use the trim control to boost the input level and see what happens. You can get some interesting compression effects.
- Also make sure you try using the trim control to lower the input level, and see what happens. In many cases it will give you a fuller high end response, which may be what you need.
- If you have too loud of an input or boost the trim control too much (gives you a louder input so it's the same thing), you can end up with really intense harmonic distortion. In some cases it can sound great, in other cases not so great. It depends what you're processing. If it sounds bad, back off on the input level!
- You should even try to lower the dist control sometimes. You get a cleaner sound but still have the smooth tape compression/filtering effects.
- One thing that I think really sets this set apart from Cassette Deck 1, is it's usefulness as a sonic enhancer. Many of the effects in this set go past 20khz, and many also have a boost in the high end. They all provide tape harmonics, which are great for making things sound louder than they really are.
- Some of these effects do have various filtering effects that are obvious, such as a very smooth low pass.
- The effects with the high end boost can provide a unique effect if driven just right. At the higher levels sampled, the high end boost actually gets squashed down. You can use this to clamp down on the high frequency content of your sound. The release control can really come in handy for shaping the results you get here.

V 1.7

Huge thanks to max for making the skins!