

Upside Your Head

Already a popular accessory, the Moth Group has now upgraded its record cleaning machine. Paul Rigby gets to grips with the Mk. II Pro...

The Moth Group has had much experience in the record cleaning machine business. Many years ago, the company used to be the importers for the VPI record cleaning machine series. Despite that venerable product's qualities however, the Moth Group spent much time repairing the machines which, if they became water-logged due to heavy cleaning liquid spillage or flooded because of the restricted reservoir size, used to split, soaking and expanding the internal chipboard part of the chassis. "We used to inject glue into the burst chipboard and squeeze it back together," said Mike Harris, the founder of the Moth Group. "The outcome was that we decided to create our own machine, the Moth, but in a 16-gauge steel enclosure with a three-part chemi-etch finish to reduce rust problems, rather than a chipboard enclosure." Although, chipboard is the basis of the chassis for the kit version of the Moth machine.

DESIGN

Highlights of the Mk.II, Moth included a three-litre internal reservoir which reduced overflow problems. The most unusual aspect of the Moth, especially when compared to the VPI, was the lack of any platter. "With the VPI," explained Harris, "when you vacuum from above you have two problems. Firstly, you have to take into account the thickness of the record to get a solid vacuum. Records vary in thickness so therefore, the datum point at which you are vacuuming varies. This is a critical measurement. VPI tried to overcome this by introducing a spring loaded vacuum arm which is then pulled down onto the record

from above. However, that uses around 50% of the vacuum pressure – just to get the arm down onto the record. We decided to vacuum from underneath. This means that the datum point is fixed. The bottom of a record is always the bottom of a record regardless of the thickness of the record."

Another advantage of vacuuming from underneath is that you remove the problems associated with a 12" platter which, while providing a good surface to sit your record upon, also provides cross contamination. That is, you put a dirty record onto the platter, you clean the top, you pick it up and turn it over. Then debris that was on the bottom of the record is now transferred to the platter and then the clean side of the record. You can actually overcome that if you use two mats: one for the dirty side and one for the clean side. However, it's quite a trial to do this every time you

clean a record!

The design features a vacuum tube that is slightly loose so that when the tube is in its nominal position there is a gap of half a millimetre between the outside edge of the record and the vacuum tube and roughly the same distance between the vacuum tube and the inside edge of the lead off grooves. When you switch on, the vacuum is supposed to be strong enough to pull the record down onto the tube at the outside edge and to lift the vacuum tube, because it's slightly loose, up against the record lead out groove.

But doesn't this mean that the Moth is now using part of its vacuum pressure to move its tube and the record into position as the VPI is accused of doing? Harris demurred, "because you haven't got to move the entire tube and because the entire movement involved is in terms of millimetres, it doesn't matter. Also, the freedom of movement is useful when cleaning warped records as the loose vacuum tube will follow a



warp."

The Mk. II was released to integrate a reverse direction spindle movement which aids in the cleaning process, helping dislodge stubborn grunge whilst a hinged plastic lid is also included to protect against dust contamination. However, during tests, I found it easier not to fit the hinges and just rest the free-standing lid on top of the Moth's chassis.

This latest version of the Moth, the Pro which is reviewed here, is basically a Moth Mk. II with an extra, internally fitted, fan. "We introduced the Pro machine," said Harris, "for continuous use. When the record is on the turntable and the vacuum is switched on, it's tantamount to you taking a domestic vacuum cleaner and moving your hand over the end of the pipe. The vacuum motor doesn't like it."

Hence, the Pro's extra fan gives a continuous flow of air over the motor keeping temperatures down which means that you can continue to clean your records all day and night if you wish.

One of the most noticeable aspects of the Moth chassis is the lack of any labels – there isn't even a Moth brand label. "After you've had the machine for ten minutes do you need labels? We're anti-label. This came about a long time ago when I was driving behind a Volvo estate and it said 'Volvo', 'Intercooler', 'Turbo', 'Thingy', 'Doo-Dah'. I thought, I know what it is, the bloke that's driving it knows what it is, so why do you need badges to tell us?"

OPERATION

Cleaning a record consists of two processes. The wash stage involves removing the screw-top puck, fitting your record over the exposed screw-thread spindle, reattaching the puck to secure the record, switching on the spindle motor to revolve the record whilst applying cleaning liquid then agitating the liquid with the included brush. Once done you move onto the drying stage. Basically, you remove the puck again, flip over the record and reattach the puck so the wet side is now facing downwards.

After you've started the spindle motor you then operate the vacuum pump. As the record moves over the static vacuum tube, liquid and grunge are sucked away. Only two disc revolutions are necessary. Any more will generate static electricity. You then stop the vacuum, stop the motor afterwards to minimise recontamination, remove the record, clean the vacuum arm and brush and repeat the whole operation of the other, dirty, side.

Be careful when screwing on the puck, however. I thought I had securely fitted mine but the screw resistance is deceiving. I later found out that it needed a couple of extra twists to properly fit it home. Also, the lack of a supporting platter means that you cannot place too much pressure with your cleaning brush on your record or it will bend. I found that positioning the cleaning brush over the part of the record moving across the vacuum arm supplied a necessary support.

Using the Moth is simple and, once you get into a rhythm, you clean on 'automatic', as it were. However, there are problems. Firstly, because of the lack of labels and the identical switches, when concentrating on the cleaning, I found myself switching on the vacuum instead of turning off the motor which sometimes, because of the cleaning stage I was at, lead to recontamination and the necessity to vacuum the record all over again. Also, the noise is deafening! This is not a problem reserved to the Moth however; the competing VPI and Nitty Gritty machines all suffer from the same problem.

In operation, you have to be aware about the type of record you are cleaning. For a 180gm LP clean as usual. However, for thinner 120gm records, make sure that you lift the end of the loosely fitted vacuum tube up a notch or the inner part of your record will not be vacuumed. According to the company, this tube should have automatically lifted to the record surface without any prompting from myself – not on the review sample.

One other point to note – and again this tends to apply to all machines in this category – cleaning an LP with the Moth will not produce a completely dry record. Vacuuming a wet record will soak the vacuum tube and thus the felt pad stuck upon it. Once vacuumed, you will probably see a faint wet line reflecting where the vacuum pad's felt pad last touched the record. This line will be more obvious the wetter you make the record or if you use a non-alcoholic liquid like L'Art du Son. The

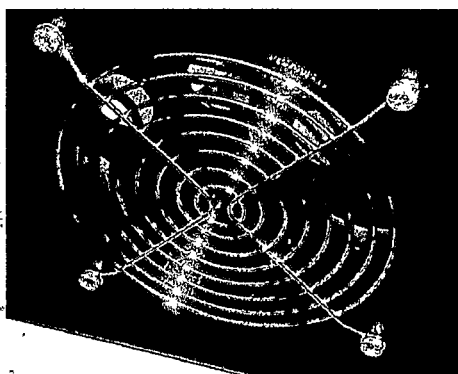
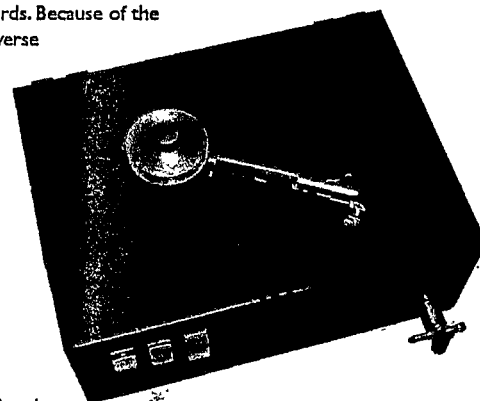
record can be easily propped up on its edge to dry – which it will after a few seconds – but there is always the possibility of contaminants remaining, suspended, in the drying liquid which will be redeposited back onto the record. This is why it is important to not only clean the vacuum arm in-between record sides but to dry the felt pads too. Again, however, this 'problem' is not exclusive to the Moth but other machines of the genre.

SOUND QUALITY

Despite the quirky operation, the Moth made a significant difference to the overall sound quality of the treated records. Because of the excellent reverse motor feature, I was able to perform a similar cleaning routine to that of the Loricraft PRC3 SE. That is, soak the record with liquid (I preferred L'Art du Son to the supplied alcohol-based liquid), agitate with the brush, leave for two minutes, then revolve the spindle and vacuum. Then repeat with the spindle moving in the opposite direction. Using this method, many of the clicks and pops were removed. I wondered, however, if particle recontamination prevented the complete eradication of the surface noise. Most impressive, however, was the removal of the caked-on grease, old Mould Release Agent and bonded dust. The Moth provided a definite improvement in basic dynamics, a widening of the soundstage and the rediscovery of musical detail across all frequencies. As such, the Mk. II Pro proved to be a definite asset to improving general sound quality.

CONCLUSION

All record cleaning machines, no matter what the price point, have an element of the Heath Robinson about them and the Moth is no different. It has its own design quirks and personality. However, if you work with the Moth by being aware of its foibles and taking care to balance the amount of cleaning liquid you use to minimise recontamination, then you will have a highly effective and very efficient cleaning machine that, because of its excellent construction, will last for many years.



VERDICT

A carefully considered design that performs well within restricted parameters, the Moth can drastically improve the sound quality of untreated records.

MOOTH MK II PRO £150
With
© 1999 123 456 789 1011
www.mouthaudio.co.uk

FOR

- reverse action
- ease of use
- build quality

AGAINST

- no legends
- quirky design
- noisy

TNT – Audio Reveiw

Introduction

This is an odd review. First I'm going to send you to my previous review of the Moth RCM mk1, otherwise I'll be repeating myself.

OK back now? So what's new, what changes can justify a review of a cleaner which is basically a wet/dry vacuum cleaner specially designed for records? Well this time it's the same machine but you can make it run backwards - no don't go! I'm serious and so are Moth because this machine is the living expression of a theory that's been knocking about for some time.

'Let's Twist Again'

So the standard machine runs clockwise, the same as a record being played, the MK11 can run first one way then reverse at the flick of the on/off motor switch. The theory runs something like this...

When you play a record the stylus traces the wobbly furrow that is a record groove. It actually exerts very high pressure on the groove wall, enough to momentarily melt the vinyl. As it's doing this it sweeps muck out of the way, often building up as fluff on the 'needle', but overall keeping the groove swept clean - but only where the stylus contacts hard i.e. the leading edge of each wave in the groove. Imagine sweeping muck across a piece of corrugated iron. The slopes going up will be well swept but the downside, in the shadow if you like, will gather the dirt. This is what happens with the record groove, the leading slope will be swept clean by the stylus but all sorts of debris will build on the trailing slope preventing the stylus from riding down the 'slope' accurately. The steeper the slopes the worse the problem, so high modulation (loud bits) and inner grooves will suffer most. The result will be a fuzzy quality to the sound as if the needle were fluffed up despite it being clean. Sound familiar? Just like a worn stylus - how many cartridges have been written off as worn out when in fact it's dirty records that are at fault? The fact that the stylus remains clean doesn't guarantee that the record isn't dirty, and using standard carbon fibre or whatever brushes is likely to aggravate the problem rather than solve it... The answer is to clean the record in the opposite direction to the direction of play, this the Moth RCM mk11 allows you to do.

Construction

It's identical, save for the two-way switch and a modified suction tube, to the mk1. This time though instead of building a kit Moth sent the ready built option and very well put together it is to - though both are still available as kits. A powder coated metal box with a clear lid - two switches on the front. It looks much better than the one I build but then I keep mine out of sight.

In Use

The process of cleaning is exactly as with the mk1 (which you've just read about...), the only difference is that at both the wetting/scrubbing stage and the vacuuming stage you can reverse direction.

Results?

First the downside... The mk1 uses a narrow slot angled to the direction of rotation. The mk11 cannot use this and so has a wider slot. The effect is that the suction is slightly less and so the record which comes out dry after 3 turns on the mk1 needs 3 turns in each direction with the mk11.

This aside there is no doubt that the cleaning is more thorough. The mk1 will clean a disc very effectively as long as it's not too filthy. Really dirty records need two or even three goes, but I have to say that a binocular microscope showed the grooves to be free of detritus afterwards. The MK11 will handle this sort of thing in one forward/backwards session. Both produce near spotless records the MK11 is just faster...

But... This is with 'normal' records where you can use the solvent qualities of alcohol. 78's are damaged by such solvents and so can be cleaned only using distilled water and a little detergent. Here the reverse action helped greatly and if your collection includes a lot of 78's the mk11's lead increases considerably.

Conclusion

You've read the mk1 review - you know what I think - if you have a large record collection you need a vacuum cleaning machine - period... Despite a rather irate correspondence with a manufacturer of some wonder chemical/brush (who refused to supply samples...) I remain profoundly unconvinced by cleaning methods other than those using vacuums. At best the alternatives sweep the muck around, removing some and leaving the rest as a line of crackles every 2 seconds, at worse they sweep much harmless muck deep into the grooves and impact it into the

vinyl.

Correspondence from people who've bought the mk11 after my review confirm this. To quote one such email - "after years of fannying about with cloths and brushes and sticky rollers and sprays and magic potions I've finally got clean records". And before you claim that your records are clean think carefully... Are they really clean? I habitually clean even new records and the difference in quality before and afterwards is quite noticeable. Originally I bought my RCM as a share with a friend. I've just bought him out and he's gone off with the mk11 totally convinced that a decent record cleaner is the best value upgrade he's ever made...

So there you are. Either Moth RCM is excellent, the mk11 better and probably worth the extra but I wouldn't loose sleep over it unless you have very dirty records or use 78's. Other vacuum based systems may be as good but until I get my hands on any I can't say for sure.

The Moth Record Cleaning Machine.

Before I begin this review I think it important to make a few things plain about this machine.

IF you have lots (say 500+) of records.

IF you ever buy second hand records.

IF your house has any dust at all

YOU MUST BUY THIS MACHINE...

Wow! - What a statement, and one I doubt if I'll ever make again. I suppose I'd better justify this otherwise my credibility, as TNT's cheapskate will go out of the window...

Firstly this machine is, as far as I know, unique in that it is available as a kit for around 200 pounds sterling or ready made for 400 pounds. To put that in perspective, as if I needed to, that's the cost of a decent second hand LP12/Ittok or 400 records from a car boot sale.

It takes the form of a wooden box the size of a record player topped by a small turntable platter the size of the record label, powered by a powerful, geared motor. Next to this is a tube with a slot in it and felt on either side of the slot. Inside the box is a very powerful vacuum motor with a reservoir to catch liquid sucked from the record. To use it is simplicity itself. You place the record onto the platter and clamp it with the small screw-on clamp supplied. Then turn the motor on and the LP rotates very slowly, 10 rpm or so, and spread the cleaning fluid using a hand held brush. A thin coating is enough, and the machine will work with any of the solutions to be found elsewhere on TNT though I use a 1:4 alcohol/distilled water + a few drops of detergent.

Once coated just flip the disc over and re-clamp it and switch the motor and vacuum on. As the disc turns 3 or 4 times you have time to wet the upper side. Then just turn the disc again and vacuum the other side. The record is now squeaky clean and dry - ready to play.

So what is the effect? Well surface noise falls, grit will have caused groove wall damage so it will still have some noise. But then the music starts... My first test record was a disgustingly filthy and worn copy of Alex Harvey's 'Sahib Stories' left over from my student days. It was unplayable and I had thought to throw it away. 2 minutes later, after a few crackles on the lead in groove, there followed crystal clear music. Apart from the gentle crackling it sounded new all the way to the centre, I was gobsmacked. There followed an orgy of record cleaning and playing ending with the usual detritus of record sleeves all over the floor. I tried old, worn, filthy and brand new disks. All showed an improvement ranging in a slight increase in clarity with new discs due to the removal of Mould Release Agent (MRA), to unplayable discs becoming listenable. BUT the biggest surprise was it's effect on my cartridge. I thought my Ortofon MC 20 Supreme was losing grip and ripe for a change, but no - it sounded new, the problem had been with the discs themselves. So the machine paid for itself on day one by putting off a cartridge change.

Before anyone says "I can do that with my brush or dust buster" - no you can't. How do I know? Because I've tried every other method of cleaning records - solvents, brushes, sticky pads, scrubbing them in the sink - and though often they come out looking shiny and new, none, not one comes close. Basically the fluid acts as a solvent and loosens/dissolves the crap on the disc. If you then just brush it, or wash it under the tap, or anything else you will wash the muck down to the bottom of the groove, the worse possible place for it. Only a proper vacuum based machine will get this out. As a guide to it's ultimate effectiveness I normally clean my stylus after every play, since using the moth it has remained untouched for 30 sides or more and is pristine.

So - a resounding success. In my case I built the machine from a kit, and this was simple, though needing a bit of fiddling to get all the plumbing right. If you can make a speaker enclosure then this is a similar level of difficulty. The instructions were a bit basic, and presented as sketches and photocopied sheets - you'll be swearing at Moth on several occasions, but in the end it went together - so what the hell... The recommended material was formica covered conti board, but I used exterior grade chipboard which though not pretty was easier and seemed to be resistant to alcohol.

With me the Moth had an easy time as my records are often second hand and I have smoky wood fires, but I would recommend it to anyone who falls into the categories at the beginning of this review. Armed with this machine cheap second hand records are not the risk they once were.

There are other vacuum based machines out there, and I believe that any would be excellent though I cannot see how the performance of the Moth could be bettered. But as always the bottom line is that the Moth is the cheapest and available in kit form. It is not a luxury but an essential purchase for any record buyer,

Contact Moth Group at mothgroup@mcmail.com

TNT – Audio review Moth RCM MK1

Before I begin this review I think it important to make a few things plain about this machine.

1. IF you have lots (say 500+) of records.
 2. IF you ever buy second hand records.
 3. IF your house has any dust at all
- **YOU MUST BUY THIS MACHINE...**

Wow! - What a statement, and one I doubt if I'll ever make again. I suppose I'd better justify this otherwise my credibility, as TNT's cheapskate, will go out of the window...

Firstly this machine is, as far as I know, unique in that it is available as a kit for around 200 pounds sterling or ready made for 400 pounds. To put that in perspective, as if I needed to, that's the cost of a decent second hand LP12/Iftok or 400 records from a car boot sale.

It takes the form of a wooden box the size of a record player topped by a small turntable platter the size of the record label, powered by a powerful geared motor. Next to this is a tube with a slot in it and felt on either side of the slot.

Inside the box is a very powerful vacuum motor with a reservoir to catch liquid sucked from the record. To use it is simplicity itself.

You place the record onto the platter and clamp it with the small screw-on clamp supplied. Then turn the motor on and the LP rotates very slowly, 3 rpm or so, and spread the cleaning fluid using a hand held brush. A thin coating is enough, and the machine will work with any of the solutions to be found elsewhere on TNT though I use a 1:4 alcohol/distilled water + a few drops of detergent.

Once coated just flip the disc over and reclamp it and switch the motor and vacuum on. As the disc turns 3 or 4 times you have time to wet the upper side. Then just turn the disc again and vacuum the other side. The record is now squeaky clean and dry - ready to play.

So what is the effect? Well surface noise falls, grit will have caused groove wall damage so it will still have some noise. But then the music starts... My first test record was a disgustingly filthy and worn copy of Alex Harvey's *Sahib Stories* left over from my student days.

It was unplayable and I had thought to throw it away. 2 minutes later, after a few crackles on the lead in groove, there followed crystal clear music. Apart from the gentle crackling it sounded new all the way to the centre, I was gobsmacked.

There followed an orgy of record cleaning and playing ending with the usual detritus of record sleeves all over the floor. I tried old, worn, filthy and brand new disks.

All showed an improvement ranging in a slight increase in clarity with new discs due to the removal of Mould Release Agent (MRA), to unplayable discs becoming listenable. BUT the biggest surprise was it's effect on my cartridge.

I thought my Ortofon MC 20 Supreme was loosing grip and ripe for a change, but no - it sounded new, the problem had been with the discs themselves. So the machine paid for itself on day one by putting off a cartridge change. Before anyone says "I can do that with my brush or dust buster" - no you can't. How do I know? Because I've tried every other method of cleaning records - solvents, brushes, sticky pads, scrubbing them in the sink - and though often they come out looking shiny and new, none - not one comes close.

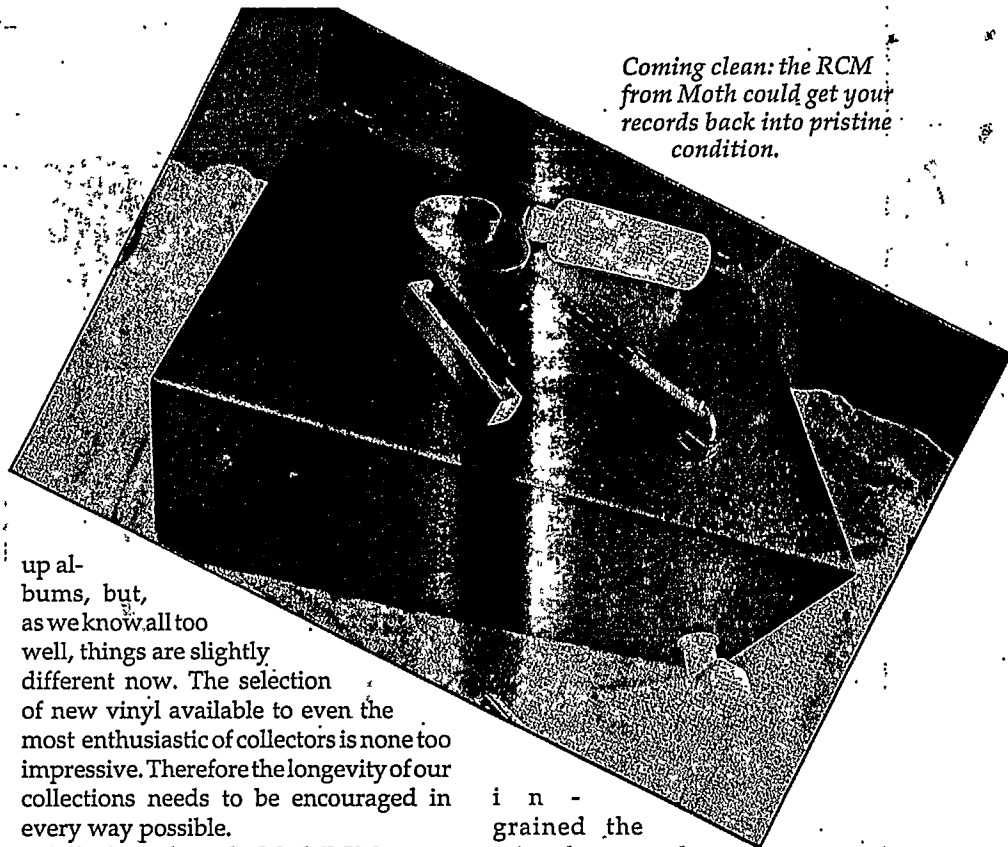
Basically the fluid acts as a solvent and loosens/dissolves the crap on the disc. If you then just brush it, or wash it under the tap, or anything else you will wash the muck down to the bottom of the groove, the worse possible place for it. Only a proper vacuum based machine will get this out. As a guide to it's ultimate effectiveness I normally clean my stylus after every play, since using the Moth it has remained untouched for 30 sides or more and is pristine. So - a resounding success. In my case I built the machine from a kit, and this was simple, though needing a bit of fiddling to get all the plumbing right. If you can make a speaker enclosure then this is a similar level of difficulty. The instructions were a bit basic, and presented as sketches and photocopied sheets, but in the end it went together - so what the hell... The recommended material was formica covered conti board, but I used exterior grade chipboard which though not pretty was easier and seemed to be resistant to alcohol.

With me the Moth had an easy time as my records are often second hand and I have smoky wood fires, but I would recommend it to anyone who falls into the catagories at the beginning of this review. Armed with this machine cheap second hand records are not the risk they once were.

There are other vacuum based machines out there, and I believe that any would be excellent though I cannot see how the performance of the Moth could be bettered. However the Moth is the cheapest and in kit form is not a luxury but an essential purchase for any record buyer.

Contact Moth Group at mothgroup@mcmail.com

Coming clean: the RCM from Moth could get your records back into pristine condition.



up albums, but, as we know all too well, things are slightly different now. The selection of new vinyl available to even the most enthusiastic of collectors is none too impressive. Therefore the longevity of our collections needs to be encouraged in every way possible.

Which is where the Moth RCM comes in. At £250 it's not particularly cheap, costing more than a few record players, but it's also available at a saving of £100 in kit form which seems like a good deal.

The RCM is a pretty straightforward affair. It is composed of a small direct drive platter and screw on clamp, and a slotted tube attached to a pretty powerful vacuum cleaner. These components are housed in a sizable metal cabinet and the protruding elements are covered by a record player style lid. On the front is a tap for draining off the cleaning fluid and a pair of unmarked switches; on the rear is an IEC mains socket. You are also supplied with a carbon fibre filament brush and a bottle for squirting cleaning fluid onto it. You can use any type of proprietary cleaning fluid, but Moth recommends a mixture of isopropyl alcohol and distilled water, with a couple of drops of photographic surfactant to break up the mold release agent on new records.

The process of cleaning records involves two stages, cleaning and drying. You clamp an LP onto the platter, press one of the switches to get it revolving and use the brush to apply some fluid, after half a dozen or so revolutions, turn off the turntable, flip the record, get it spinning and turn on the vacuum. This is the point where you start to wonder where the ear defenders are. It's not very quiet I'm afraid. However, it does the job, after a dozen or so revolutions the fluid, along with the debris, has been removed and you are left with a very clean looking bit of vinyl.

How much sonic difference this makes depends on a number of factors, but the most influential are the state of the record in the first place and the type of cartridge you are using. Logically enough the more

in-grained the grime the greater the difference a good cleaning is going to make, but with some of the cruder styli attached to less expensive cartridges, and for that matter those that track like a leech (ie Shures), the differences can be significant even with quite clean looking discs. My Audio Note IO IIv with its very small vdH type 1 stylus doesn't make a big deal out of dirt or scratches, probably because it gets deeper into the groove and cuts through the dirt better than most. Thus it didn't reveal dramatic differences between records that had and hadn't been cleaned. Information retrieval improved subtly and noise became less prominent but I can't say that my musical insight took a quantum leap. However, I'm certain that less sympathetic cartridges would revel in cleaner grooves and come up with a far cleaner sound.

It may well be worth experimenting with different cleaning agents, if they work well when applied by hand, using the machine would probably yield even better results. Once you've cleaned a record it is worth putting it in a new sleeve of the Nagaoka or similar variety. This will keep out the dust and reduce the static that attracts it.

What is just as important as the absolute sonic result is the fact that your records, and for that matter your stylus will last longer if there's no abrasive agent between them as they pass each other — which has got to be worth a few bob if you use an exotic cartridge.

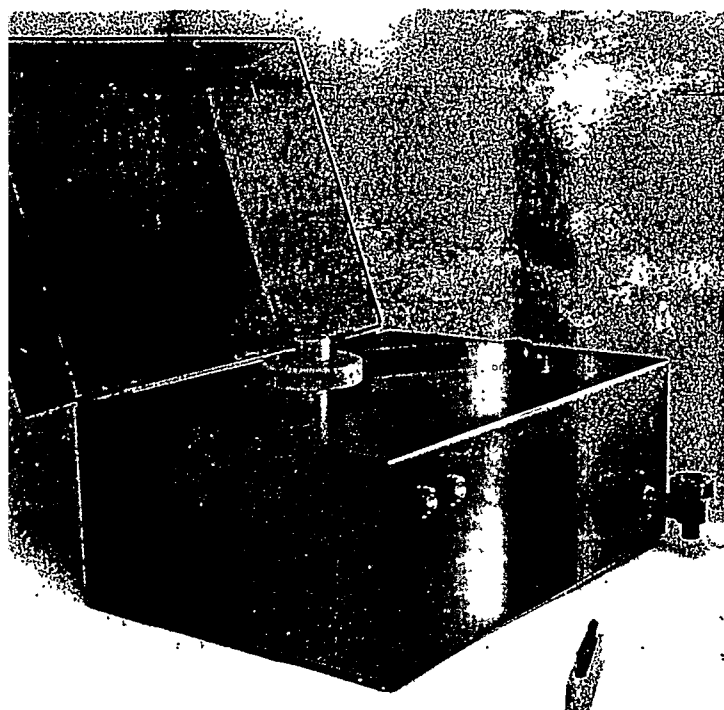
Being a keen secondhand record collector I will be reluctant to give back the Moth RCM and can heartily recommend it to fellow enthusiasts. Vinyl may look pretty dead but its reign is not over yet.

Deep down, dirty and in the groove

Vinyl may be the ultimate format but it's not capable of giving of its best if it isn't clean. Moth's record cleaner is one way to achieve that, and Jason Kennedy has been getting his records wet.

Some people don't seem too concerned about vinyl cleanliness, the stylus will do the job, they say. But I have always been reasonably fastidious about my "black diamonds". So when Moth offered to lend me its RCM (record cleaning machine) I jumped at the chance to get my collection into sparkling condition.

Although many records can sound very good when in a less than scrupulous state, I am always concerned that the small amounts of dirt that exist will act as an abrasive while being dragged past the stylus and dramatically increase record wear. When records are looked after well and kept clean it's very difficult to hear the effects of extensive use, and with cartridges that track well, especially those with low tracking weight, even after a hundred or so plays the degradation is pretty subtle. Once upon a time you could go out and get another copy of your scuffed



LP records get dirty. It's a fact of life. But that's not to say there's nothing to be done about it. Using a proper cleaner puts paid to pops and restores them to pristine condition

Trial by Jury: MOTH RECORD CLEANER

Record cleaning is hardly new; methods to relax static charges and remove dust and fingerprints have been around for ages. When LPs were still plentiful, investing in an expensive record cleaning machine wasn't important because you could easily and cheaply replace dirty and damaged pressings. But now LP fans are having to look more and more to the secondhand market.

Buying used LPs is always a gamble; you don't know if a pressing is noisy or damaged until you've played it – and by then it's usually too late! Even if you buy from a shop that agrees to exchange faulty secondhand discs, what's the point if they can't supply you with another copy? If the LP in question is a rare or prized early copy with special artwork and/or centre label, you may not want to take it back anyway. So wouldn't it be nice to have an effective means of cleaning pre-owned discs?

Groove damage takes many forms. An LP can look spotlessly clean yet suffer acute surface noise problems because the lacquer from which it was pressed was damaged before or during electroplating. In such cases no amount

of cleaning will make any difference. Another disc may look dusty and fingermarked, yet reproduce cleanly.

Dust by itself isn't necessarily a problem; it's usually quite soft and easily pushed aside by the stylus. But, coupled with a greasy fingermarked surface, it may impact itself to the grooves (and stylus) to create noise. Not only that, dust eventually contaminates the delicate innards of your pick-up cartridge, affecting its sound.

The case for clean LPs is surely not in doubt; the problem is how to achieve cleanliness without creating problems. Deep effective cleaning involves a wet treatment. Only a water-based fluid will deal with the problems that cause surface noise. But water-cleaning records can be dangerous; you can easily leave a quiet LP sounding noisy if errors are made.

The most important part of any wet-cleaning process (assuming the appropriate fluids are used) is drying the disc. Allow the liquid to dry naturally and you risk ending up with a noisy surface – though the LP may sound perfectly quiet if played while still wet. What's needed is some sort of vacuum pump to suck the liquid off the surface.

In essence the Moth record cleaner is simply a turntable with a powerful suction pump. You

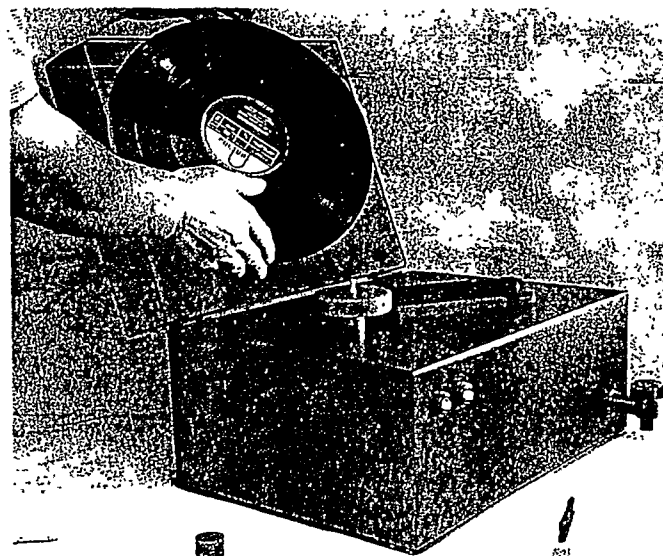
manually apply the cleaning fluid, flip the record over, and switch on the vacuum letting the disc revolve two or three times. Result? A clean, bone-dry LP surface in a few seconds.

As cleaners of this type go, the Moth is well designed, sturdily built, and easy to use – albeit noisy during operation. It is not fully automated, but strikes a nice balance between simplicity, cost and complexity. At £333 it is good value, and keen DIYers can buy the innards in kit form for

£180 though they'll have to construct the case themselves.

The key to any LP wet cleaning system is the fluid used. Moth can supply an alcohol-based fluid from LAST at £15 for 500cc, but suggest mixing your own from distilled water and isopropyl alcohol, adding a drop or two of photographic wetting agent to help the fluid 'spread' easily on the disc surface.

Personally, I harbour doubts about cleaning LPs with alcohol-based fluids; they clean the sur-



Apply cleaning fluid to the disc and place it on the Moth...

face, but can leave it 'dry', stripping vital lubricants from the vinyl. However, much depends on the alcohol/water mix: Moth suggests a ratio of four parts water to one part alcohol, and says no damage will occur unless a disc is repeatedly cleaned. You can use just distilled water, but alcohol cuts through greasy deposits that water alone won't tackle.

One of the stiffest tests for any LP cleaner is how it leaves discs that are already spotlessly clean. Most do a reasonable job with really dirty LPs as almost any result will be an improvement. But some cleaners are slightly rough and abrasive; they do their job, but leave LP surfaces with light cosmetic damage.

Both visually and audibly the Moth proved excellent; no visible surface damage (lines, marks or scuffs) was apparent, and the discs were left looking brighter and shinier. Surface noise was lower too – both loud clicks and pops, and general background mush.

The music itself sounded better! Cleaned LPs reproduce with greater firmness and security, sounding clearer, fresher and more detailed. The treble was crisper and cleaner with less harshness – especially towards the end of each side.

Records that mistrack or distort may not sound perfect after treatment, yet the mistracking should seem 'cleaner' – as though the stylus were seated more securely in the groove rather than sounding completely out of control.

For those wanting to take things further, a pre or post cleaning

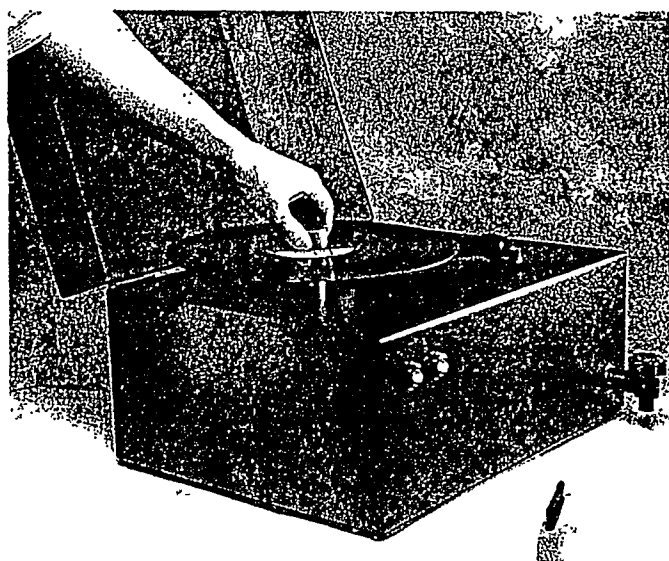
“THE DISCS WERE LEFT LOOKING BRIGHT AND SHINY”

with LAST 1 and 2 will give even better results. The Moth machine acts like a laundry; LAST treatment is akin to dry cleaning. Combine them and your LP should be as clean as possible – though not 'dry' squeaky clean.

There is a certain technique to cleaning records, no matter how automated the machine. It's a good idea to clean dirty but expendable LPs while learning. But you soon get the hang of it.

With LPs getting rarer, many vinyl enthusiasts want to keep their collections in pristine condition. The Moth record cleaner, used properly, will make your best discs sound better, and salvage quite a few noisy LPs that would've been unplayable without treatment. Your stylus/cartridge should last longer too.

If you've made a reasonable investment in vinyl, £333 isn't such a high price to pay for something to preserve your collection in tip top condition.



...clamp it in place, turn on the suction and clean the record

THE PANEL

CHRIS FRUEN

System: Roksan Xerxes, SME V, Kiseki Blackheart, Active Naim SBL loudspeakers

Steve at Uxbridge Audio cleaned several of my records with the Moth record cleaner. After showing me into the dem room and explaining about the cleaner he played the records twice and then cleaned them. The differences were surprising. They were not what I had expected, which was mainly the removal of surface noises. In fact there were more pops and crackles after the records had been cleaned, though it's only fair to point out that the albums I took along were old and scratched as well as dirty.

The music seemed far clearer and better focused. Cleaning a late Sixties/Early Seventies album by The Wailers brought out the sound well although it still sounded noisy. According to Uxbridge Audio, the reason the Moth record cleaner made the album sound noisier was probably that the dirt sucked out of the scratches and pits laid the imperfections bare for the stylus to trace.

The Moth record cleaner removed finger prints and grease from a newer copy of a Penguin Café Orchestra album and managed to reduce the level of surface noise. A dusty old Traffic album meanwhile sounded audibly clearer with more extended bass and treble and a better feeling for the music, especially the vocals.

Overall I was quite impressed. I've got a lot of records and was considering buying a record cleaner, possibly a secondhand Keith Monks machine. But £350 is a lot of money.

I've been playing all the albums since having them cleaned and reckon that although my system is a bit more tolerant of surface noise, the benefits are still audible. However I'm under no illusions. This is a record cleaner not a record restorer. Damaged discs cannot be improved.

CLIVE JOHNSON

System: Rega Planar 3, Pioneer A-400, Mission 760i

I went to Uxbridge Audio for my demonstration of the Moth Record Cleaning machine. It's a very straightforward piece of equipment and easy to use. I'd say the effects vary from record to record. I went really prepared with a number of dirty records I hadn't played for years. The cleaning process has made them sound noticeably better. In particular I find I can hear the tunes and individual notes more easily. The band seems to be playing more together. Unfortunately the machine didn't manage to eradicate the audible pops and clicks. Maybe I should have had them cleaned twice. But I was very pleased overall. The improvements I heard on records by artists like Gerald Albright, Whispers and Ray Parker Junior were very noticeable. I'd say that anyone with a large LP collection, around 1000 albums or more, should think about buying a machine such as the Moth Cleaner.

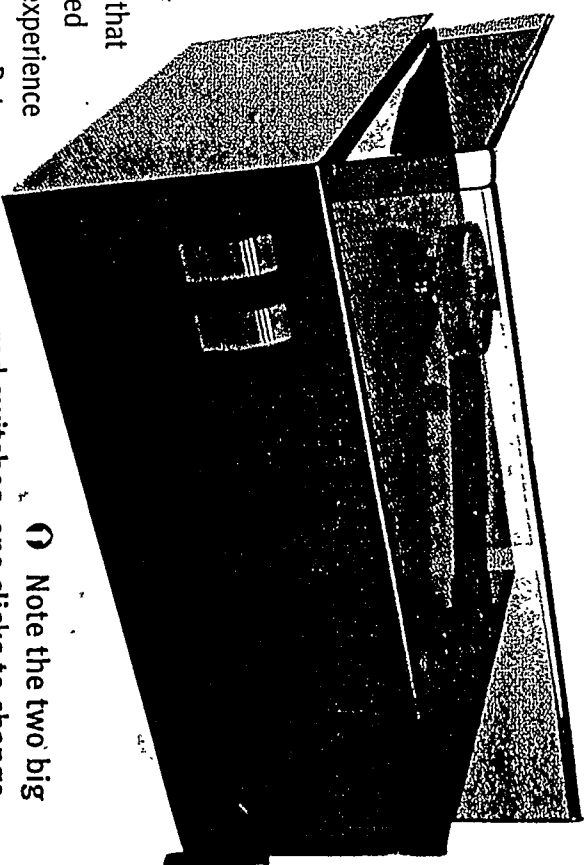
UXBRIDGE AUDIO PROVIDES A MOTH RECORD CLEANING SERVICE. THE CHARGE IS £1.25 PER ALBUM. RETURNED IN A FREE NAGAOKA ANTI-STATIC INNER SLEEVE. (081) 742 3444

Moth RCM Mk II

After several years of

production, the Moth Record Cleaning Machine has been updated. This simple piece of machinery was designed as a cost-effective solution to the problem of record hygiene, when other contenders on the market like the Keith Monks and Nitty Gritty were out of reach of shallower pockets. The principle of the original machine was to slowly rotate the record, allowing you to apply a cleaning solution to the top surface with a small bristled brush. The central boss was unscrewed, record flipped and re-clamped, and a powerful suction pump would quickly and effectively suck away all fluid and dissolved dirt as well. The result was as good as most other machines, but attainable at a lower cost. For the DIY persuasion looking to save even more, a kit version was made available that required the constructor to build up a cabinet from the material of choice, but typically Handy Andy-grade MDF. So that was then — now, the Mk II version has arrived with one significant difference. It can swing both ways. Whereas the original (and most other) machines spin slowly clockwise, the Mk II has a reverse switch to reverse the clockwise motion, to allow stubborn residues on the record surface to be removed more effectively. The revision has entailed not just an extra switch on the front of the steel box, but

some thought applied to the all-important suction tube. This is the interface between the vacuum machine and the delicate record surface. The Mk I utilised a plastic tube with narrow slot stretching the length of an LP side from lead-in to lead-out groove. Sealing the gap with a pair of stick-on velvet strips, the idea being that these could be peeled off and replaced when they get worn — which in my experience was after a couple of years of steady use. But this was always one of the machines weaker points, I felt, after one replacement strip peeled off at an inopportune moment, letting a disc get somewhat marked. The new pads are much improved, I think, as the soft velvet strips now fold over the edge of the slot and are attached from within the tube as well as on the outside. This is especially crucial given the added manoeuvrability of the disc as it changes direction. In use, I had no problems here at all. The machine is just as noisy as ever — wear earplugs or at least closed-back headphones with perhaps even some music playing, if you're preparing more than a few records at a time. That way you'll still be able to appreciate them when

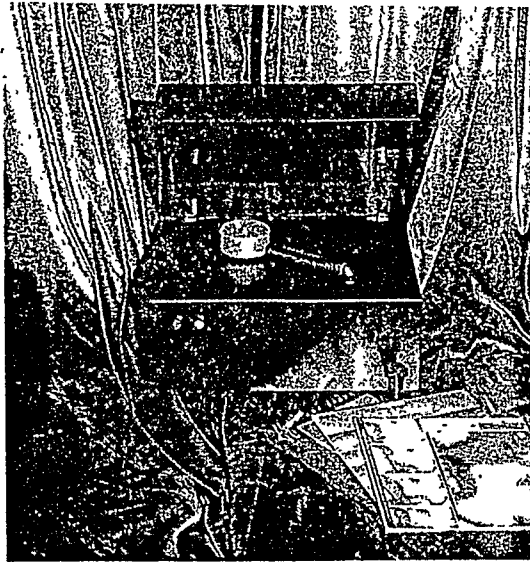


➔ Note the two big red switches: one clicks to change direction, the other activates vacuum pump. Now complete again with proper lid cover

you've finished cleaning! The old machine is still available at £400 ready-made or £225 in kit form, while the ambidexterous Mk II is £450 or £255 in kit. There is also an upgrade kit for Mk I to Mk II modification, at £60.

WORDS ANDREW HARRISON

PRICE	£450 (or £255 in kit)
SUPPLIER	Hi-Fi News Accessories Club
CONTACT	01234 741152



*At last: an affordable record cleaner for extending
the life of your LPs*

by KEN KESSLER

Of all the items available to hi-fi casualties, the most coveted and least-purchased is the automatic record cleaning machine. Even though these sell for far less than the cost of a record library (or one containing over 75-100 LPs), British vinyl junkies lust for 'em but never seem to make the move. They regard cleaning machines as luxuries for the well-heeled.

We can't imagine why, when turntables, cartridges and arms costing over £500 sell well enough to dispel accusations of meanness, so we've pressured a supplier into producing a machine which eliminates cost considerations as much as possible. Without compromising the machine.

The maker is Moth and the record cleaner is – dig this – a kit. Yes, you can order a fully-assembled version for £299, which puts the machine into VPI and Nitty Gritty territory, but that contradicts the first paragraph. For half that price, you get a disassembled version, complete except for the cabinet. And you can make it as basic or luxurious as you like, using metal, wood, medite or anything else you know how to fashion into a box. The plans are thorough, the necessary DIY chassis is quite uncomplicated and the assembly of the action bits is easier than a 99p Airfix model.

The Moth cleaner has a footprint similar to a 'normal' record player, but it's tall: 260x460x340mm (hwd). Indeed, it sports a clear, hinged dustcover identical to that of the Moth turntable. Lift up the lid and you see a red mini-platter with a screw-down puck and a velvet-trimmed, slotted tube which crosses the underside of the LP radially, from outer edge to label. At the front are two on/off switches, one for the motor and one for the suction pump.

All you do is wet the LP with the cleaning agent of your choice (Moth recommends one part Isopropyl alcohol to four parts distilled water), with the supplied brush. The easiest way to do this is to place the LP on the platter, screw down the clamp and switch on the motor. Flip the LP over, switch on the motor and then the pump. Let it spin for 20 seconds. Then, switch off the pump first, followed by the motor if you don't want it to leave a 'line'. The results? A spotless and bone-dry LP. So confident am I of its efficacy and safety that I even used it to clean my mint, mono copy of The Mugwumps LP on Warners. (With a witness, I might add.)

If you own a sizable collection and you've been putting off buying a record cleaner, please do yourself a favour. However irreplaceable the collection may have seemed since the dawn of CD, note now that replacing LPs has been made even more difficult because of the Smith's/Our Price action. If you can handle a screwdriver, think of this not as a £150 purchase but as a £150 saving. And then think of what it will do for your record library ...

ACCESSORIES CLUB