

FM ACOUSTICS NEWS

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Acclaimed the world over:

The *Resolution Series*[™] Phono Linearizers/Preamplifiers



From engineers to record collectors, from audiophiles to Shellac enthusiasts, from musicians to producers and reviewers, the reactions and verdicts are precisely the same: never before in the history of music reproduction has it been possible to extract so much music, detail and emotional context from record grooves.

It was the breakthrough in the design of true balanced circuitry together with new components that made the design of FM ACOUSTICS' phono linearizers possible. The R&D of this project was a tremendous expense and commercially speaking, the whole project seemed rather questionable. Huge development costs combined with a - then - almost non-existing market. We decided to continue despite this as the possibility to hear for the first time records precisely as they were meant to be heard was too thrilling to be bypassed. Many classic performances can only now be admired in full thanks to the *Resolution Series*[™] phono linearizers/preamplifiers.

The Resolution Series™ 222

With the FM 222 & FM 122 it is for the first time possible to optimally restore, transfer and archive analogue recordings with an accuracy never before thought possible. No other phono preamplifier provides anywhere near such reproduction. Cartridge fine tuning with unlimited flexibility together with many other features such as the fully variable RIAA de-emphasis characteristics allow accurate reproduction of any record with any cartridge/turntable combination. The difference must be heard to be believed. All reports the world over agree:

- "The FM 222 is designed for the most committed LP "Die Hards"; you will never regret paying so much for such a masterpiece.... Your old and new LP's & 78's collections have all been reborn again."
Audio Land Magazine, Hong Kong
- "It is without doubt the best phono preamplifier that I have ever tried."
Suono Magazine, Italy
- "You cannot do anything better for your record collection. Truly fantastic music reproduction."
- "With the FM 122 and FM 222 one experiences musical treasures as they were meant to be heard. The best."
Image Hifi, Germany

"...After having listened to the FM 222 for a couple of weeks, I feel I have to write you. I have been involved with High End equipment for years and have also collected records since I was in school. Since the beginning of this year, I finally felt I had arrived at the ultimate a system could yield. I had been working toward this end for the last two and a half years. I have always only used tubes so therefore optimizing a system which involved the search for excellent tubes, which were also rare, made the project even more complex.

When I ordered the FM 222, I did it because I was intrigued by its design concept and your reputation. I did not, however, expect to enhance the quality of the sound my system produced; perhaps, at best, to give it a new perspective. I was, therefore, even more overwhelmed by what I experienced.

Right out of the box, the FM 222 impressed by its stunning appearance. It looked more like a fine piece of jewellery than audio equipment. The minute I played the very first record, I knew I never heard anything like this before.

The sense of presence, ease and natural detail. The richness of tone and resonance. The vibrant, vital quality of voices and instruments was simply breathtaking. Never before had I heard my records reproduced this way. For the very first time since I have been trying to achieve the very best in sound reproduction, I felt I was in the recording venue. I was part of the moment when these records were being recorded.

Finally, I believe I have an insight and new understanding of the meaning of recording music and its reproduction. The experience is what makes all this work worthwhile and for it, I must thank you."

Ausbert de Arce, New York, U.S.A.

"With the FM 222 one can almost make a late RCA "No dog" stamper sound like a "Shaded Dog" stamper."

"The accuracy of the FM 222, combined with the wonderful musical feeling is simply superb."

Eckhard Hempel, Sydney, Australia

FM 222 CLONES...

"Imitation is the sincerest form of flattery."

Other manufacturers will no doubt try to copy some features of the FM 222, such as e.g. the variable loading and the variable RIAA de-emphasis. In this way they try to make customers believe that the units will be able to perform like an FM 222 or FM 122.

However, the variable RIAA de-emphasis developed by FM ACOUSTICS is much more complex than a couple of controls and switches. It is easy to design a "lookalike" but the principle of FM ACOUSTICS' circuit is unique. Copying the knobs and switches is one thing, duplicating the performance is quite another.

Just one example: the signal levels passing through the Resolution Series™ phono preamplifiers are very much higher than in usual preamplifiers. Other designs are simply unable to provide the necessary headroom required, so the resulting sound will be compressed and ill-defined, totally opposite of what an FM ACOUSTICS' phono linearizer/preamplifier provides. The circuits are totally unique, cannot be copied and remain proprietary.

THE FUTURE OF ANALOGUE

The *Resolution Series*[®] 122 Phono Linearizer/Preamplifier

Immutable Music is famous for their "Transfiguration" MC cartridges. The following comment was in a fax that was received:

"We have purchased the FM 122 with its FM 102 power supply, and we are very pleased to inform you that if vinyl collectors have not heard the FM 122, they have not heard the future of analogue. Quite simply, the FM 122 is musically excellent. It takes the bass clarity, definition and pace to an unexpectedly high standard for LP replay".

Seiji Yoshioka, Director, Immutable Music, Yokohama, Japan

SWISS NATIONAL RECORD LIBRARY INSTALLS FM 122



With the introduction of the outstanding FM 122 phono linearizer/preamplifier, for the first time ever, records (LP's, 45's Mono records as well as Shellacs) can be reproduced as they were intended to be heard and this at a - no, not cheap - but a reasonable price.

The National Record Library of Switzerland tried the FM 122 on restoration work, for transfer and archiving of the huge collection of analogue recordings (more than a million records) in their libraries. The comment after the engineers heard the FM 122:

"The FM 122 is in a class of its own. The delicacy of reproduction in combination with the features make it truly unique. A resounding success. It is in constant use in our transfer facilities, everybody wants to use it!"

The FM 122 is a dream component, enabling the replay of vinyl treasures in a way never before thought possible. No compromise in the design and manufacturing is allowed.

As the FM 122 is single ended the component count of the true balanced FM 222 phono linearizer/preamplifier is practically halved. This allows it to be much lower in price and it thereby achieves an

unbeatable price/performance ratio.

Via its continuously variable de-emphasis controls (no switches!) the FM 122 allows the replay of analogue recordings with the precise mirror image of the pre-emphasis (cutting) curve used at the time. In this way it can extract the original tonal characteristics, imaging, ambience and dynamics of each instrument and voice with a never before attained precision and realism.

"The musicality of the FM 122 Phono Preamplifier is simply phenomenal. It reproduces music purely as music. Fantastic!"

Willi Maissen, Uster, Switzerland

"By acquiring the FM 122, I made a giant step forward in this field."

Herman A. Witjes, Gümliigen, Switzerland.

Ask for a demonstration to experience this marvel.

Inspiration System™

What a reception! An entirely new world in music reproduction.



The official world Premiere of the *Inspiration System*™ took place at the Palace Hotel in Lucerne, Switzerland, truly one of the "Leading Hotels of the World".

The reactions were so overwhelming that it is considered to have presentations in some other major cities.

Comments from attendants:

- ♪ "This is sonic Nirvana"
- ♪ "Absolutely incredible"
- ♪ "Music like never heard before - as stated on the invitation!"
- ♪ "Far above any audio system I ever heard"
- ♪ "With this system one can finally enter the world of real music reproduction"
- ♪ "Honestly, after all of these years in this business I have not heard anything coming anywhere close to what I heard here"
- ♪ "I came with high expectations, and was literally blown away"
- ♪ "Such sound one can only dream about"
- ♪ "Music in its purest form. For the first time in all these years my wife said she now understands fully why I indulge in this hobby"

At the end of the presentations many who attended refused to leave the room and stayed on to hear a second presentation. Some attended even a third one and one gentleman from Holland - who is respected for his ability to precisely judge the musical accuracy of music systems - stayed for two full days!

His comment on the *Inspiration System*:

"It is far beyond anything I have ever heard. The longer you listen to it, the clearer it becomes: This is THE reference."

The *Inspiration System*™ had been previously previewed unofficially to a selected group of distributors at the CES Show in Las Vegas.

After the first day, the news had made the rounds and literally dozens of the most famous designers and manufacturers of electronics and speakers lined up to hear the system. They either left quietly or openly acknowledged the absolute excellence of the *Inspiration System*™. As an example here the comment of the chief engineer from a very famous manufacturer: "It must be admitted that this is by far the closest to real music reproduction we ever heard. Even compared to today's "State of the Art" technology it is in an entirely different realm."

The most famous engineers in audio, from Tom Jung (DMP) to John Eargle (Delos) were thoroughly impressed by the system's capabilities.

"Your room at CES exhibition sounded great. Your room at every CES exhibition is consistently great, and this is just like your products."

John A. Miller, Acoustic Sounds, Salina, KS, U.S.A.

At the official world premiere in Lucerne the two hour demonstrations were shared between Jürg Schopper of Winterthur, one of Europe's most dedicated and knowledgeable collectors of music rarities on vinyl (and a true music lover) and Manuel Huber of FM ACOUSTICS. Mr. Schopper presented a dream collection of records, amongst them "Hifi à la Espagnola" and Ruggiero Ricci's Carmen Variations. Never before have these records been reproduced more realistically!

Amongst the other titles were test pressings of popular music such as Ry Cooder, ZZ Top and an Elvis album from 1954 which sounded just mediocre until Mr. Schopper adjusted the FM 222's variable RIAA de-emphasis which made the singer and musicians literally jump alive! What a difference to the usual "audiophile" systems!

FM ACOUSTICS' president, Manuel Huber presented both, some rather unique and also some easily available records, almost bringing back to life the most cherished musicians ranging from saxophone great Ben Webster to the phenomenal pianist Arturo Michelangeli Benedetti (who owned FM ACOUSTICS equipment). On Saturday the end of the demonstration was scheduled for 7 p.m. but listeners just refused to leave so the music did not stop until 11 p.m.!

On Sunday some newer titles from CLASSIC RECORDS were presented, amongst them Sonny Rollins: "The Bridge" and Dave Brubeck's "Time Out", fine re-cuts by Bernie Grundman, which resulted in a wide applause from the audience.

The *Inspiration System*[™] is a joint effort of 3 high level engineers from Switzerland and FM ACOUSTICS who builds all electronics including the special active and passive crossovers. It is a "complete system" approach and includes everything except the source(s):

an FM 266 linestage perfectly balances the signal and sends it through *P.I.T.* cables to the special electronic crossovers. From there it is fed to two stereo amplifiers (one channel of each amplifier drives the bass speakers, the other channel drives the middle and higher frequencies). The mid- and high-frequency signal is then supplied to the passive crossovers and is then sent via multi-pin connection to the individual drivers.

The *Inspiration Systems*[™] are only made-to-order because of the extreme difficulty in assembling a system of such outstanding accuracy and such low tolerances. They are not systems for the usual "audiophile"; these are systems for artists, seasoned music lovers, collectors and libraries who must have ultimate accuracy and realism, and who are ready for the final, once in a lifetime investment.

No, FM ACOUSTICS does not manufacture loudspeakers. But we have agreed to make the *Inspiration System*[™] available on a made-to-order basis because of its absolute excellence.

FM ACOUSTICS' UNIQUE PROTECTION SYSTEMS

"Protection Systems that do not limit Sound Quality"

The *Resolution Series*[™] amplifiers incorporate a computerized protection system that employs a multitude of sensors continually checking various performance parameters. This allows the amplifier to drive any known load but also instantly recognize any danger or negative influence on the audio signal. If an error situation occurs the amplifier will instantly disconnect its load and switch itself off. Errors such as transients on the mains line, instability and HF oscillation of preceding equipment, presence of strong RF signals, short circuits, DC offset voltage, non-satisfactory earthing/grounding arrangements etc. can do no harm in an FM ACOUSTICS. In other amplifiers such errors often cause damage to speaker and/or amplifier.

Experience has shown that this system is a far better way of protecting the load and the amplifier than the usual output fuses, signal clamping, electronic voltage limiting or signal compression used in ordinary amplifiers, as all these negatively influence the audio signal. With this system there is absolutely no possibility of limiting or compression nor other influence on the audio signal. Either the amplifier works perfectly or it switches off, signalling the type of fault.

How do FM ACOUSTICS amplifiers achieve their unique, practically unlimited output current? In the *Resolution Series*[™] amplifiers the current capability of the amplifiers is not limited internally. It is only dependent on the capabilities of the mains supply.

Amplifier designers face a dilemma: there must be a short circuit protection for the output stage but the typical fuses, current or voltage limiting in driver or output stages and other kind of limiting used today all have a very negative influence on the audio signal. Furthermore these circuits can be triggered by dynamic Back-EMF (the current that is fed from the loudspeakers back into the amplifier once the diaphragm has been excited) and various other dynamic phenomena. This results in a cold, harsh sound when driving a speaker: sharp limiting, harsh clipping, even oscillation or extremely fast spikes are typical reactions of usual protection circuits. These effects do not normally occur with a so-called "dummy load" (i.e., the 8 Ohm power resistor used on the typical test bench) but are present when driving certain, more demanding speakers.

With some of today's speakers accurate reproduction of dynamics requires huge output currents from the amplifier (not a dozen - as usually believed - but literally hundreds of repetitive peak Amperes!) and this at the same time when large voltage outputs (up to 180V_{PP} continuous) are required, a tremendously difficult task. When one adds to that the amplifier's capability of driving impedances to below 1 Ohm (!) without any form of limiting or signal compression plus the capability of the *Resolution Series*[™] ingenious protection circuits to instantly recognize any short circuit, it becomes clear what a formidable task this development presented.

TRUE TO THE MUSIC: FORCELINES



Resolution Series™ **REQUIRES FORCELINES**

The *Resolution Series™* power amplifiers have much higher demands on speaker cables than any other power amplifier and can therefore only be used with FORCELINES.

There are several reasons for this requirement, one of them is the output impedance which defines - amongst other things - the amplifier's capability to control the speaker diaphragm. Generally, the lower the impedance, the better the control exerted on the drivers. Typical "high-end" amplifiers have output impedances of 50 mOhm to 200 mOhm; the output impedance of other solid state and that of tube amplifiers is even higher. The *Resolution Series™* amplifiers, however, have an output impedance that is no less than 4-15 times lower! This means that the cable connecting the speaker becomes as many times as important!

If standard "audiophile" speaker cables would be used, the unique characteristics of the *Resolution Series™* amplifiers would be defeated and therefore the amplifier would be unable to perform at its best, simply because of the limitation of the cables. With ordinary high-end cables the unique damping of the FM ACOUSTICS amplifiers - into which a lot of R&D has gone - is lowered dramatically. To avoid losing these hard-earned characteristics of the amplifiers a totally neutral, ultra-accurate low impedance cable had to be developed.

Resolution Series™ power amplifiers are therefore only available in combination with FORCELINES.

Other amplifiers can also benefit from the unique characteristics of FORCELINES. Several different versions are available to allow optimal performance with a variety of different amplifiers.

Contact your distributor or FM ACOUSTICS for further details and Technical Bulletin No. 23.

TUNEABLE SPEAKER CABLES

There are noticeable differences in how speakers and amplifiers react to changes of capacitance and inductance of speaker cables. A characteristic unique to FORCELINES speaker cables is that their capacitance and inductance are tuneable by the user (other cable designs have fixed capacitance and inductance). Thanks to their construction as separate conductors, the physical position of the conductors in relation to each other (and therefore the performance) can be optimized for each combination of audio components. Some amplifier / speaker combinations will work well when the cables are twisted, while in other systems separating the two conductors will provide better results. It also is possible to keep the two conductors separated at a fixed distance with the special spacers that are provided with every FORCELINES package. FORCELINES allow fine tuning for optimal performance and thereby guarantee ultimate, lowest loss signal transfer.

"What I report here sounds almost unbelievable, but by replacing the 2 huge mono block amplifiers with the single FM 611 and just playing track 8 of the Sheffield test CD, one immediately realizes that even a simple sine wave on a CD sounds clearly much better through FM ACOUSTICS' power amplifiers."

A user in Switzerland

THE COMPLETE SYSTEM

Only the *complete system* approach will provide the full experience of an FM ACOUSTICS' component under test. So, even if you are only interested in a single FM ACOUSTICS' component, do not limit the experience by just listening to that unit combined with other electronics. Ask for an audition of a complete FM ACOUSTICS' system. This way the component will be heard at its best and you can be sure not to miss part of the experience.

Precision Interface Technology

PHONO INTERCONNECT CABLES IMPROVE THE LP12 TURNTABLE



Several users and distributors have informed us that by replacing the cables in the LP12 turntable with Phono Interconnects from *Precision Interface Technology*, an amazing improvement in music reproduction is achieved. This is a simple modification that has a great effect. Here some user's comments:

"It is really amazing; I would never have thought that the phono interconnects play such an important role. It really makes the LP12 fly."

*"...astounding clarity of the music and most of all the clear positioning of the musicians. For the first time dreams became true. Music began to live."
Peter Lastovka, Freilassing, Germany*

"Apart from the astounding sonic improvement, we found that the ultra high flexibility of the P.I.T. cables allows the LP12's support system to be more effective. There is no strain on the sub-chassis thanks to the cables' superb flexibility. The cable also considerably improves bass reproduction."

CABLE TESTS

An interesting blind comparison of 16 different cable brands was recently reported from Malaysia. A group of ten consisting of music lovers and musicians sat down for listening comparisons of various cables.

Among the cables evaluated were FORCELINES speaker cables.

Each cable was evaluated with two different amplifiers and two pairs of speakers. No "influencing" of the listeners was possible since the cables were hidden and the cable brands were not given until after the test was over. The test setup was realistic, using decent but not very expensive audio components and a variety of music material.

The result very briefly: ten out of ten subjects chose FORCELINES cables as the most accurate and natural sounding speaker cables.

The second test involved interconnect cables. The result was equally pronounced. Ten out of ten listeners chose the ultra flexible *Precision Interface Technology* interconnects over all other cables in this test.

The jury was not just asked to rate the cables in relation to each other but also to make subjective comments. For P.I.T. cables, attributes such as "sweetness",

"fantastic transparency", "better dynamic contrasts", "more finely delineated hi-end", "more neutral", "more real", "pinpoint focusing at the same time as extended depth and width" were given. An interesting test that confirmed once again that the most accurate cables do not have to be bulky or outrageously expensive.

One must be aware that certain systems or combinations of components may require a "filtering" type of interconnect cable, this to compensate for system nonlinearities and errors. If say, a thinny sounding CD player/converter is combined with a bright sounding speaker, a neutral and linear cable will reveal the brightness more than a "filtered" cable. The errors are therefore more pronounced with the linear cable that is - in this case - sounding brighter. This is exactly how it should sound!

Rather than using a filtering type of cables as a "band aid" to compensate one error with another error, it would make sense to first correct the original error(s)!

The above is the reason why FM ACOUSTICS does not claim that P.I.T. cables will always and in every system "sound better" although in decent systems the improvement is immediately audible.

FOR PROFESSIONAL USERS

Shawn Murphy buys *ClassAmp*[®] M-1's

World famous engineer/film music recordist Shawn Murphy extensively uses the *ClassAmp*[®] M-1 in various recording locations, including ABBEY ROAD Studio, London and TODD-A.O. STUDIOS, Studio City, Hollywood.

Shawn Murphy chose "the *ClassAmp*[®] M-1's for it's "uncanny ability to precisely reproduce what is captured by the microphones. The *ClassAmp*[®]'s ambient retrieval and its high frequency detail and extension seems to have no limit. At the same time it is totally free from any of the stridency usually associated with units having extended high frequency response".

"(...) Ambient retrieval is beyond what I have ever heard before. The high frequencies are extended in a very likeable way - not aggressive, not bright - but there is this feeling of unlimited frequency range that results in beautiful transparency (...)."

With the new concept of amplifying the tiny microphone signal to line level right near the transducer (the *ClassAmp* can be clipped to the microphone stand or placed near the microphone), any negative influence such as hum, noise interferences etc. are dramatically reduced, and a much better signal-to-noise-ratio is achieved.

The *ClassAmp*[®] M-1 remains absolutely stable and this - contrary to most mic preamplifiers - at any gain setting. It also provides precision stabilized phantom voltage to the microphones and features an unmatched common mode rejection (better than 100dB CMRR over the full frequency range!).

Some of Shawn Murphy's recent recording projects:

1992	1993:
"Sommersby"	"Schindler's List"
"Falling Down"	"Jurassic Park"
"Home Alone 2"	"Indecent Proposal"

1994:	1995:
"Speechless"	"To Die For"
"Little Woman"	"Outbreak"
"Legend of the Fall"	"Dolores Clayborn"
"Fantasia II"	
"Clear & Present Danger"	

"In every single mic preamp shot out, the ClassAmp[®] M-1 outperformed all other microphone preamplifiers."

John Catchings, Cellist, Nashville TN, USA

Dario Dragoni on the *ClassAmp*[®] M-1

"I have had the occasion to test your *ClassAmp*[®] M-1 microphone preamplifier; with enthusiastic results. I have made recording tests with a Hamburg Steinway grand piano in a lyrical theatre, where the ambience was particularly good and the auditorium acoustically very equilibrated. The sound of the piano was reproduced with exact intensity and optimal colour, lively and fresh. It had a very focused stereo image, is deep and rich in harmonics."

"Listening to the recording was very convincing and confirmed the quality of the *ClassAmp*[®] M-1. The reproduction was very beautiful and defined. It is very detailed with fine definition, stable, rapid and clear transients, "pianissimo" are all exceptionally present. The extreme high frequencies are well equilibrated and the medium frequencies clear and defined."

"A special note is in regards to the linearity: the stereo image is clear and wide, and, most important, real."

"The freedom of coloration is another point that has been much appreciated, a clear sound with real timbre, identical to the original, and in general, a realism, a fidelity of sound that has taste; a reproduction that is never tiring."

Dario Dragoni, chief engineer at the Music Production Centre SRL, Somaglia, Italy.

ClassAmp[®] M-1 Power supply cables

Power supply cables to connect a second *ClassAmp*[®] M-1 to the power supply are available in different lengths (each FM 202 power supply can power two *ClassAmp*[®] M-1's, one via the cable fitted to the power supply and one via an additional power supply cable).

Standard lengths have the following ordering codes:

ACC- 22083: (2 mt)
ACC- 22084: (5 mt)
ACC- 22085: (10 mt)

Any other lengths can be manufactured to order.

Better Phantom = better Sound!

When setting up the *ClassAmp*[®] M-1, remember to *switch off* the Phantom voltage of the mixing desk or the equipment to which the *ClassAmp*[®] M-1 is connected. The Phantom voltage for the microphone is provided by the *ClassAmp*[®]'s own high performance power supply. Much better Phantom stability is achieved this way.

Practically all mixing desks allow you to switch off the 48V Phantom power. If this should not be possible, bypass the desk and connect the *ClassAmp*[®]'s output directly to the recorder's input.

For best performance it is recommended to bypass the mixing desk electronics completely.



Rear view of the *ClassAmp*[®] M-1: with 12V-0-48V Phantom switch next to the power supply connector unknown to many users - and manufacturers - 12V is required by some rare vintage microphones).

Sampling with the *ClassAmp*[®] M-1

When recording samples, use a pair of musically accurate microphones, feed them into the *ClassAmp*[®] M-1 and from there directly into your recorder. You will be able to record the most beautiful sounding samples ever.

"The ClassAmps[®] are absolutely excellent and at their price worth every penny."

Gabe Wiener, Quintessential Sound, U.S.A.

New recordings with the *ClassAmp*[®] M-1

Amongst the recent productions done with *ClassAmp*[®] M-1's were recordings of the *Pro Gloria Music* label:

Ricerca, a collection of German keyboard music before the time of Bach, and

Lagrime Mie, a collection of Italian lute songs.

These recordings were done by Gabe Wiener, president of *Pro Gloria Music* and mastering facility *Quintessential Sound Inc.*, New York, USA. The natural ambience and the sound of the instruments are impressive.

ClassAmp[®] M-1 Offer:

Try or rent a Producer's Set

For professionals that have not yet experienced the *ClassAmp* M-1 FM ACOUSTICS is now offering the possibility to rent a *Producer's Set* (2 *ClassAmp* M-1 Precision Microphone Preamplifiers, one FM 202 Power Supply, one ACC -22083 power supply cable all housed in a flight case).

If you would like to hear for yourself what the *ClassAmp* M-1 can do for your recordings, contact FM ACOUSTICS for details on the trial/ rental conditions. There may be some time before a "Producer's Set" can be sent as they are in constant demand. If you foresee an interesting project where you would like to use the *ClassAmp* M-1 contact FM ACOUSTICS or your distributor well in advance.

The offer gets even better: if a *Producer's set* is purchased within 3 months from the rental of the set, 50% of the rental amount will be credited to the purchase!

Conditions may be different in other parts of the world. Enquire for details.

AUDIO VIRTUAL STANDARD (AVS) DEVELOPERS USE FM ACOUSTICS

A new system, called the Audio Virtual Standard recording/reproduction system was presented by Andrea Von Salis at the Top Audio Show in Milan. This new system consists of specially modified microphones, fed into *ClassAmp M-1* microphone preamplifiers to a 88/96 kHz DAT tape machine. Immediately after the performance, the recordings were reproduced in the same room through a high accuracy audio system, consisting of the FM 266 true balanced Linestage and the FM 611X power amplifier.



The Bobby Watson Trio being recorded live with the new AVS System and ClassAmp M-1 at the Milan Audio

The characteristic that the AVS system is most remarkable for is a very natural ambiance and spaciousness without the phasiness that is often present with existing "sound improvers".

The reproduction, the dynamic contrast, the air between the instruments and the applause, as well as the naturalness and "be there" effect is impressive.

Reproduction at home is possible with an existing stereo system. No processors, black boxes or any "add on's" are needed as the process is done during the recording.

A larger and more complex AVS system can achieve a 360° image by adding a dedicated processor, another stereo amplifier and two rear speakers.

The AVS could improve existing music reproduction systems. The crucial point is if the important recording companies are willing to adopt the system. The system is not complex or cumbersome nor very expensive.

The AVS system is worth looking in to as it is different from the currently available recording and surround sound systems.

DANCEHALL AMPLIFIERS...

In an article published in the professional audio press, the "expert" explained in detail the test he performed on a power amplifier to determine its sound quality. Referring to this as "reference critical listening evaluation", the place he chose to perform that test was a discotheque playing - would you believe - dancehall music! Nothing against dancehall music but it is simply impossible to determine musical qualities with music that is generated mostly electronically. The conclusion of such a test is totally invalid and the reader is misled.

Reviews and tests must be read carefully. Do not just accept the conclusions of the reviewers... Always ask in what circumstances the conclusions were reached or what influences may have played a role.

"IN IT" FOR THE MONEY...

Some of today's audio manufacturers just lack fairness and ethics. After hearing the *Inspiration System* at the Las Vegas show a well known manufacturer of loudspeakers explained that "this year we will launch a US\$ 110'000.00 loudspeaker.

When asked what this speaker's characteristics and features are and how the price was arrived at he replied: "We have not designed it yet. Important is to have a price that will "knock them out"!"

A manufacturer that has not finished designing a product yet but already knows the final price ???

A sad but quite non-typical example of what "high end" means to some of today's audio manufacturers

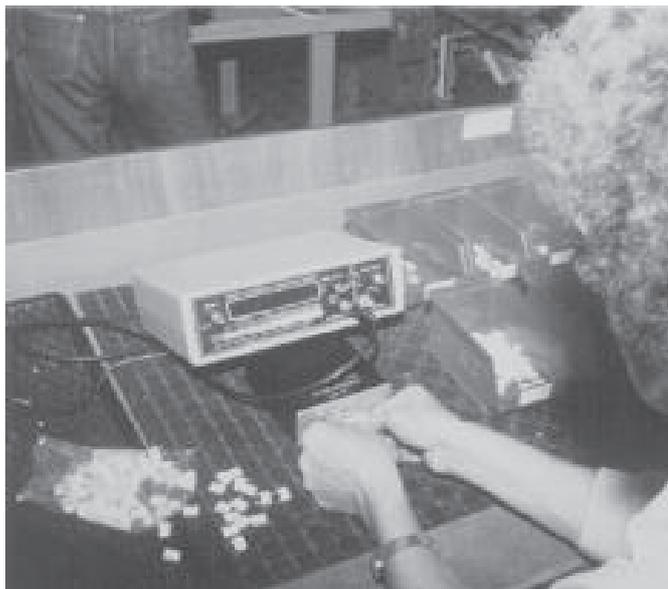
UNIQUE TESTING PROCEDURES AT FM ACOUSTICS

One of the most important considerations when selecting professional audio equipment, is the long-term stability and reliability of the product. An inspection of details such as the standard of craftsmanship, the quality of components, the standard the soldering, the wiring, the component's current and voltage capability in relation to the demand, contact materials etc., provide clues about the ultimate potential of the products. Of equal importance is the standard of quality assurance during production.

Prior to shipment FM ACOUSTICS' products undergo calibration, pretesting, burn-in, vibration test. Then, each and every FM ACOUSTICS products are subjected to an additional final-test.

To reduce failures to zero, a great number of special procedures and quality control measures have been developed at FM ACOUSTICS over the past 24 years. With the exception of high quality metal film resistors (which have a negligible failure rate of 1 out of 14 million pieces), each and every individual part is inspected before assembly.

After that, every single building block, P.C. board and part assembly undergo extensive testing and pre-calibration. Intense care and dedication goes into each product with literally no limits on testing time. All parts are tested several times during the manufacturing process (e.g., comprehensive components pre-selections, visual and electronic board checks, multiple pretests etc.). Thereafter each stage of the product is individually hand-calibrated and fine-tuned with ultra high-accuracy testing machines. This way every single component is tested between 3 and 7 times before the product even comes onto the final test! While in this way production costs are much higher chances of component weakness or failures are reduce by magnitudes.



Selecting MIL specified capacitors to even tighter tolerances (to less than 0.1%!); typical tolerances are 10-20%!) to obtained.

ELECTROLYTIC CAPACITORS

At FM ACOUSTICS are selected not only for their performance but great precautions are taken that these components have long life.

Certain components age more rapidly than others. This applies, for instance, to electrolytic capacitors. There are large quality differences in electrolytic capacitors. Furthermore, many contain pollutants. The electrolytic capacitors that are specially made for FM ACOUSTICS in an exclusive process employ a nontoxic electrolytic that is biodegradable by nature.

One of the problems that had to be overcome was the initially shortened lifetime of the first capacitors employing biodegradable electrolytic. The research program initiated took quite a bit of time and funds but all goals were eventually surpassed. Today these capacitors do not only feature biodegradable electrolytic but have the same or better life expectancy as the best MIL (military) grade capacitors.

This is an example how at FM ACOUSTICS we do not just take the easy and inexpensive way. Time and funds are made available to inside and outside engineering teams to find the optimal solution even for things that only will become important in 10 or 20 years.

The result of this major investment in research guarantees no waste and pollution and longer lifetime of the products, of course at a cost, but in 10 or 20 years this will long have been amortized.

NEWS FROM ENGLAND

We were delighted to hear about an English couple who after lengthy evaluation decided to purchase an FM ACOUSTICS' power amplifier.

Both have been involved in the music profession all their lives playing and teaching piano. When asked why they chose an FM ACOUSTICS' power amplifier, they replied that they cannot settle for second best and want to enjoy every moment as they listen to music many hours a day.

As they both use hearing aids, the distributor felt compelled to ask if they were really sure about this decision as a lower quality amplifier would probably work as well. Upon which the 92 year old couple replied that with the hearing aid the difference between barely acceptable and excellent is very pronounced. They would not settle for anything less than the best to fully enjoy the music!

NET PRICE POLICY

FM ACOUSTICS has a *Net Price* policy. All prices indicated on the price list are *Net Prices* when the equipment is paid for in cash. Additional services of the dealer or distributor such as consultation, delivery, installation, calibration, etc. is invoiced separately.

THE BACKGROUND

In recent years, prices in the audiophile market - together with discounts to dealers - have constantly been increased. This has resulted in situations where a client, upon entering a retail outlet, is offered a discount of say 20% on product A without even asking. If the client mentions he is more interested in product B, he is offered an even higher discount on product A and so on...

Such discounts are only possible when a product is:

- is intentionally overpriced
- is an outdated model
- has flaws
- provides mediocre performance.

The naive client - who thinks the more discount he gets the better off he is - is being taken advantage of. This price/discount spiral has been carried higher and higher; at the end to nobody's advantage. These artificially inflated prices bear no relation to reality.

By introducing *Net Prices*, fair and realistic pricing to all clients worldwide is guaranteed. Conditions are such that the distributor is compensated acceptably but that he does not make excessive profit. So do not ask an FM ACOUSTICS distributor for a discount. He is unable to offer this.

A fair *Net Price* policy benefits all and results in a cleaner, more transparent market.

It also brings transparency into the second hand market. The inflated prices of certain products result in the fact that even one day after being bought a product is worth only 40%-60% of its "list" price; a tremendous write off. While the discount may have been generous, at the end of the day the consumer will be disappointed by the product's low resale value. Thanks to *Net Prices* the resale value of FM ACOUSTICS products is high.

DELIVERY TERMS

Over the past years demand for FM ACOUSTICS products has been increasing steadily, and the entire staff at FM ACOUSTICS is working hard to keep up with the demand. As all our products are handcrafted, an increase in production is a slow process that must be carefully controlled to avoid negative influence on quality. This is the reason why quantities are limited.

At press time the delivery terms vary between 3 weeks and 5 months depending on product. For an exact delivery date contact the factory.

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LITERATURE AVAILABLE

- "Like a Swiss Watch": Bert Whytes's report on the *Resolution Series™* in "Audio" magazine, USA.
- "A New Approach to Reference Quality": Report on the *Resolution Series™* 611 in "TAS" USA
- "*Resolution Series™* 266, 611 and 811": French report in "La Nouvelle Revue du Son" (English translation available).
- "Swiss Neutrality": A description of the *Resolution Series™* FM 266; "Audio" magazine, USA.
- "The *Resolution Series™* 266 & 811": A review in the Japanese "Stereo Sound" magazine (no translation).
- "Les Muses d'Or": A reprint from "L'Audiophile" magazine, Paris (English translation available).
- "The *Resolution Series™*: An article that appeared in Taiwan (no translation).
- "FM ACOUSTICS *Resolution Series™* 811": Article in "Suono Magazine", Italy (English translation available).
- "Best Buy": A review in "Stereo Sound" magazine, Japan (no translation).
- "Vinyl korrekt entzerrt": Report on the *Resolution Series™* FM 122 in "Sound" magazine. (English translation available).
- "FM 222": A review of the *Resolution Series™* FM 222; "Suono Magazine", Italy (English translation available).
- "FM 222": A review of the *Resolution Series™* FM 222; "Audio Land" magazine, Issue May, 1996, Hong Kong.
- "FM Acoustics *Resolution Series* FM 122 phono preamplifier": Review on the FM 122 in "Stereophile" magazine, Volume 20 No. 3, U.S.A.
- "FM Acoustics 122 & 222 phono Linearizer / preamplifier": 2 part report in "Image HiFi" magazine, Issue January / February & March / April, 1997.

NEW Data Sheets

- *Resolution Series™* FM 122 Phono Linearizer / Preamplifier
- *Resolution Series™* FM 411 Power Amplifier
- *Resolution Series™* FM 266 Precision Preamplifier
- *Precision Interface Technology®* Phono cables
- FORCELINES



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