



# A LIVING MEMORY FOR A DREAM THAT CONTINUES

**Luciano Pavarotti**

The story of the first unpublished  
analog Master Tape.



**Luciano Pavarotti** and his  
personal archive of live  
recordings on magnetic tapes

The history and technique of  
restoration and remastering  
of this great artistic heritage

A project by  
Hemiolia Records in collaboration  
with the Luciano Pavarotti Foundation



One day the Master Luciano Pavarotti said:

*“All artists are a little bit superstitious, helps to easy tension. For example I use to look for a bent nail before going on stage because once it brought me very good luck”*

...Another thing that the Master and his entourage never forgot to do, was to ask the sound technicians for a recording of each concert on magnetic tape.

All those tapes have been jealously kept for many years in the Master's archives and, later, in the archives of the Foundation dedicated to him however they have suffered the aggression and harmful consequences of the passing time.

Thanks to the collaboration with Hemiolia Records, the Luciano Pavarotti Foundation has undertaken the ambitious project to recover this wide musical archive that today Hemiolia is able to make available to all the passionate fans of the unforgettable tenor.

It is an artistic and historical heritage of huge value which also contains many unpublished works and material heard only by the Master himself that come from different concerts performed in different locations all over the world.

The tapes, all two or four tracks stereo, with different technical characteristics in terms of support used, equalization and speed of recording, have undergone a meticulous restoration from a structural and physical point of view, since time passing had made their weight felt and most were damaged by bonding phenomena and in some cases affected by mold too.

Safety copies were then created on RTM SM900 magnetic tapes, in stereo mode two tracks, 15 ips.

Later, the skilled hands of Pietro Benini, the Hemiolia's sound and mastering engineer, completed the job with a sophisticated, long and very difficult work process using safety copies as a source.

It took over two years of continuous work in the Hemiolia study, in Italy, to complete the work and create the Master tapes you can listen to today.



Pietro Benini, the Hemiolia's sound and mastering engineer

The challenge was to create a new high quality Master tape, with an integral analogue process, starting with the not multitrack tapes but stereo two tracks, that came from recordings made in different environments and with different orchestras organic.

Beyond this, almost all the recordings presented phase problems and incorrect balances, as these tapes were not intended for any future musical productions but were more simply recordings destined to the personal archive of the Master and were made using stage mixers used for live concerts.





Hemiolia Studio in Savio



For Hemiolia, the problem wasn't to create "only" a good master tape that would certainly have had and still has a great historical and musical value, but to get a different result, outstanding in terms of quality and emotions during the listening and all this had to be done in a completely analogical way.

Most of the tapes also had unknown technical characteristics because they had incomplete, deteriorated or in some cases missing labels and we have also found some times different types of tapes on one roll.

The work took place in the Hemiolia studio in Savio, in the province of Ravenna, in Italy in four topic phases.

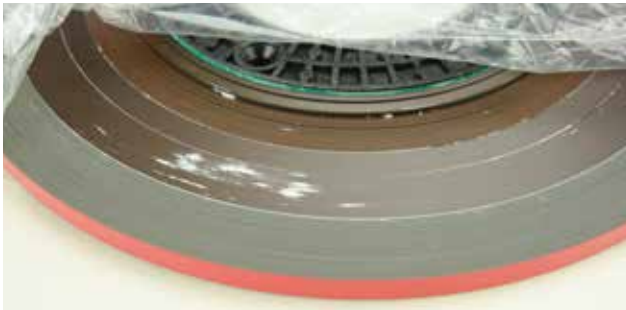
The process went on as follows:



Magnetic tapes with different equalizations, speeds, tracks (CCIR / NAB - 7.5 ips / 15 ips - 2 / 4 tracks)



Damaged by bonding phenomena and in some cases affected by mold too



Different types of tapes on one Roll

### ***1) Phase one: Restoration***

Each tape was physically examined and tested.

Most of the tapes examined were found damaged by bonding phenomena and in some cases affected by mold too

In the next step the "baking" operation of the tapes was carried out in a special oven at a temperature between 50 °C and 55 °C over a period of time which, depending on the level of degradation achieved by the binder of each single tape examined, went from one hour up to several days.

It is important to underline that the effects of the treatment just described are always temporary in each case and impose a time limit of processing within 1 or at most 2 weeks from its execution and then we immediately determine the equalization and speed of reproduction of each single tape preparing ourselves to the safety copy.

In order to handle all types of tape, in our studio we have tested various reproduction devices with different mechanical and electronic characteristics (Studer, Telefunken, Nagra, Otari), finally arriving, after long reflections, to the choice of our Studer C37  $\frac{1}{4}$ ", and A812  $\frac{1}{4}$ " as a player for two tracks tapes and Otari MX5050 QXHD  $\frac{1}{4}$ " for four tracks tapes, to proceed the following copy phase.



Studer C37



Studer A812

## ***2) Phase two: Copy***

Before starting this work phase, in collaboration with the experts of the Pavarotti Foundation, we have chosen the tapes to be used for our common project, the “live concert Luciano Pavarotti” on reel.

However the aim of the Foundation was to secure the entire music archive and we were obviously asked to digitize the contents of all the tapes. The tapes ( two or four tracks) were all read once after the restoration with the Studer and Otari players, with a fundamental difference for the tapes chosen for the project (only two tracks) which, besides being saved in digital format while they were being read, they were simultaneously duplicated on tape.

The C37 Studer has been connected as a player to our D&R Merlin 96/96 analogue mixer together with the various outboard devices that we will list in next step 3, an Otari MTR15  $\frac{1}{4}$ " - 2 tracks, has been connected as a recorder and we have copied the contents of all the selected tapes.



### 3) Phase three: Mastering

Using the safety copies created during step 2, sixteen single tracks have been separated and re-opened from the two original tracks (8 for the left channel and 8 for the right channel) using our customized Studer A80-16 tracks for transferring on a 2 " SM900 RTM tape.

The 16 tracks have been separated for frequency groups with specific analogue mastering devices and split by our D&R Merlin 96/96 Mixer as follows:  
Frequency groups for each individual track.

Track	Left Channel	Right Channel
1	10 Hz - 200 Hz	10 Hz - 200 Hz
2	200 Hz - 400 Hz	200 Hz - 400 Hz
3	400 Hz - 800 Hz	400 Hz - 800 Hz
4	800 Hz - 1.5 kHz	800 Hz - 1.5 kHz
7	1.5 kHz - 3 kHz	1.5 kHz - 3 kHz
6	3kHz - 6 kHz	3kHz - 6 kHz
7	6 kHz - 12 kHz	6 kHz - 12 kHz
8	12kHz - 25 kHz	12kHz - 25 kHz



Each individual track was individually mastered and we have used the following machines with different settings according to the needs of each single track, or part of it, and the environment of each recording:

- Maselec MLA-4 (Eq. Compressor Expander Triband)
- Studer D19 (Pre Amplifier controller Valve Drive)
- Tube Tech CL 1B (Compressor Valve)
- Orban 536 A (Dynamic Sibilance Controller)
- Drawmer 1960 (Pre Amplifier Compressor Valve)
- AKG BX 20 (Analog Natural Ambience spring Reverb)

To allow the various mastering phases in a completely analogical way, in addition to the Studer A80-2"-16 tracks, four Otari MTR15 1/4"-2 tracks and two Studer A812 1/4"-2 tracks were used with RTM SM900 tapes.

Once the mastering operations were completed, the 16 tracks were remixed with the D&R Merlin 96/96 Analog Mixer to get to the two final stereo tracks.

Once obtained these 2 mixed stereo tracks, the choice of recording machine, always after long trials and multiple reflections, has been one of our 1/4 "MTR15 Otari, thus creating the new production Master Tape.

We feel that it's necessary to point out that these restrictions have been carried out with the full respect for the Opera without denaturalising the voice of Master Pavarotti or the sound of his orchestra.

#### *4) Last phase: Tape Duplication*

The final duplication of the tapes destined to the sale was made in the production room of the Hemiolia headquarters in Perugia, Italy, using our duplication chain, recently upgraded and strictly maintained, which is constantly maintained in perfect efficiency with extremely restrictive periodic verification and calibration procedures.

As a player unit in this case, an Otari MTR15 was chosen instead of the Studer A80 VU, usually used and connected to the 12 Slave Telefunken M15A recording units, these recently customized by our technicians too, optimizing them in the best possible way for recording.

We have worked with great passion, enthusiasm and commitment to complete this difficult job, but the result we have achieved has compensated all our efforts.

We are happy today to be able to give all the fans an instrument that goes far beyond the already huge historical and artistic value of its content by generating, during its listening, sensations and emotions that closing our eyes have the ability to materialize, in front of us, the presence of an artist who will always remain unique for his talent and charisma.

The tape runs and the dream continues...

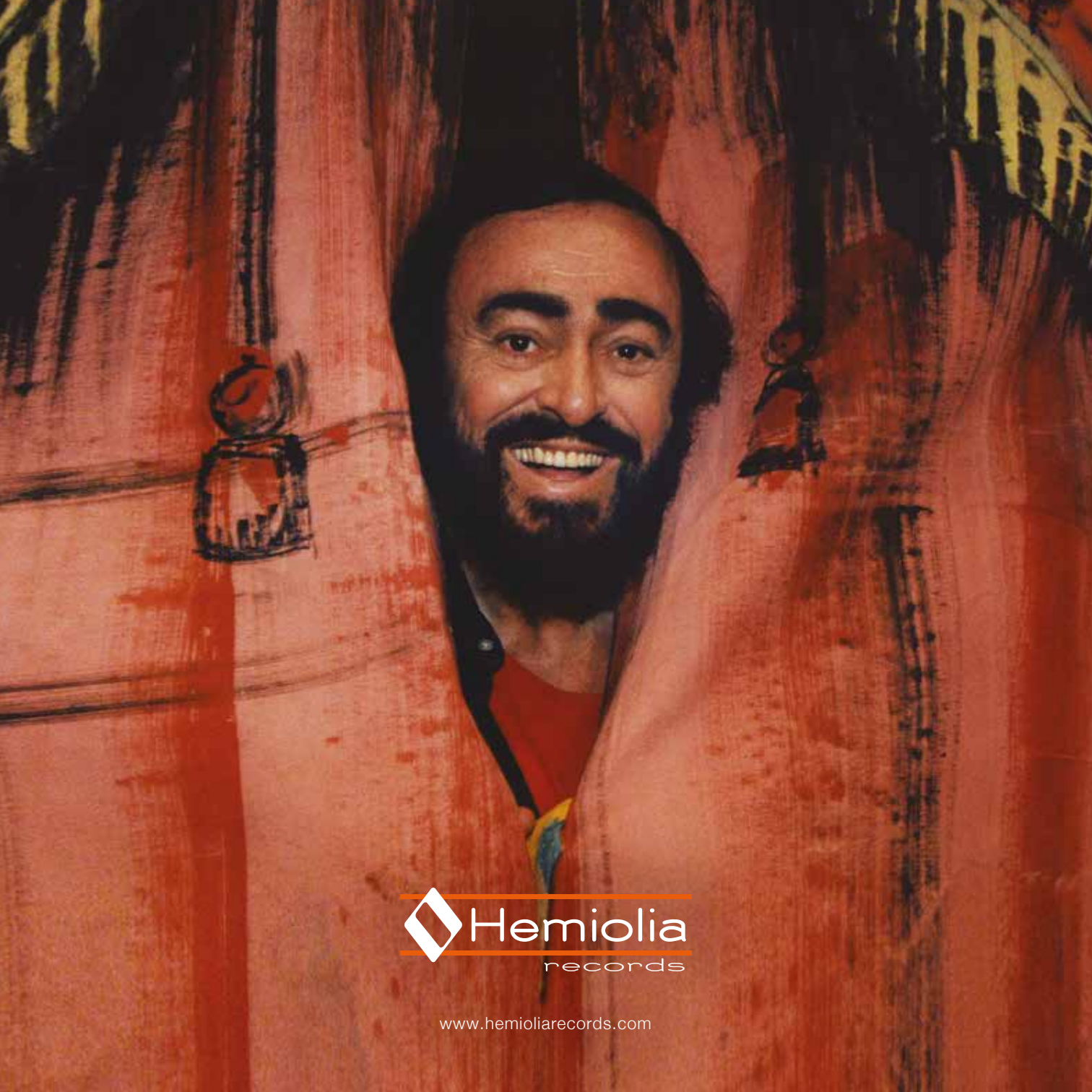
*Hemiolia Records Team*



Otari MTR15 (player unit)



Hemolia's Production Room with 12 Telefunken M15A (recorder units)



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