

# The Beatles Recording Reference Manual

Volume 4

*The Beatles*  
through  
*Yellow Submarine*  
(1968 - early 1969)

## Corrigendum

Current as of Winter 2023

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Edited by  
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Corrigendum



# About this Corrigendum

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It's clear, I'm not perfect.

In researching, writing, editing and producing *The Beatles Recording Reference Manuals*, I made some errors. Some of these errors were of omission, some were of misinterpretations of information that I was challenged on and found my conclusions wanting, and others were bothersome copy/paste issues that were not caught in the proofing stage of book production.

Regardless of their type or nature, I take responsibility for them all.

I know these books are not cheap to own, and I also know that Beatles fans interested in this material are some of the most detail-oriented fans in the world. You don't want to pay for the same book twice, and you want the most accurate and up-to-date information possible regarding the work of the band in the studio.

This corrigendum is intended to provide you with all the content that changed between the first version of Volume 4 and its current edition. As appropriate, I have included individual song narratives, diagrams, and sessions where information was modified due to one of the error types noted above. I have not included content where typographical or formatting errors occurred, and global changes (small, but essential corrections that would span multiple sessions) are noted in their own section, as opposed to on a session-by-session basis.

These pages can be printed and inserted into your volume.

Thank you to all the fans and scholars who have continued to help me make these books as good as they can possibly be. I am forever grateful to your contributions and critical eyes.

*Jerry Hammack*  
Toronto, Ontario  
Canada

# Global and minor changes

- George Harrison's 1957 Les Paul guitar, "Lucy", was noted to be a "Les Paul Custom" in multiple sessions and other content throughout the text. The guitar was actually a 1957 Les Paul Goldtop, though the finish was removed and refinished in an SG-style red. According to Gibson; once a Goldtop, always a Goldtop.
- Photographic analysis indicates that Eric Clapton played his 1960 Les Paul Standard for his work on *While My Guitar Gently Weeps*.
- Starr's *Glass Onion* drum kit has now been accurately identified thanks to Ringo's drum curator, Gary Astridge. The kit was comprised of the bass drum from his 1964 Ludwig Oyster Black Pearl "Super Classic" drum set, combined with the bass drum, stand-mounted rack toms, floor tom and stock Supra-Phonic 400 snare from his new 1967 Ludwig Hollywood Maple set. The set also possibly included three 20" Paiste Formula 602 cymbals.
- Relying on a mis-identified Glyn Johns mix of *Across The Universe*, I noted that he had removed Bravo and Pease's backing vocals from his version of the song. This was incorrect. A mix included on the 50<sup>th</sup> Anniversary release clearly includes the backing vocals in the right channel.
- The Indian instrument known as a tamboura has been noted in this and other volumes by a number of accurate, though possibly confusing names (including a few mis-spellings): tanpura, tambura, etc. It has now been standardized as "tamboura" in all text and diagrams, as this is the most common name for the instrument.

# Dear Prudence

## Sessions

- August 28, 1968
- August 29, 1968
- August 30, 1968
- October 5, 1968
- October 13, 1968

If ever there was a song that solidified the benefits of eight-track recording in The Beatles' collective consciousness, it would most likely have been John Lennon and Paul McCartney's *Dear Prudence*. The recording was the sum of 16 performances: four guitar parts, two drum tracks, double-tracked lead and backing vocals, percussion, piano, and even a flugelhorn. The ease and relative speed in which the song was constructed was remarkable given the number of performances involved. Starr was absent for the song's recording (on Peter Sellers' yacht in the Mediterranean), having temporarily left the band during this period, and it took McCartney recording a pair of drum tracks to cover his unique absence.

The technical team for the song's first session on August 28<sup>th</sup>, 1968 at Trident Studios included producer George Martin and balance engineer Barry Sheffield.

The song was recorded to the eight-track Ampex AG-440-8 primary tracking machine.

The backing track featured Lennon on his 1965 Martin D-28 acoustic guitar, Harrison on his 1968 Gibson Super Jumbo J-200 acoustic guitar, and McCartney on Starr's 1964 Ludwig Oyster Black Pearl "Super Classic" drum set.

Trident didn't document takes in the same way as EMI Recording Studios, and therefore take 1 of the song was likely not the first take recorded. It probably represents the best of numerous passes at the track, each previous pass being erased by the one that followed. The backing track "take 1" would be the foundation for all work on the song.

The order of events that followed isn't known with any precision. What can be determined however, is that Lennon's double-tracked lead vocal superimpositions to take 1 was recorded prior to any additional drum work on the track.

From an analysis of the final track layout, the following chain of events is most likely:

Lennon superimposed his double-tracked lead vocal, followed by Harrison adding a double-tracked lead guitar part on his 1957 Gibson Les Paul Goldtop ("Lucy") electric guitar. For amplification, Harrison used one of six rigs available to him: the 30-watt 1963 JMI Vox AC30/6 Twin Treble amplifier, the 85-watt 1966 Fender Showman (Blackface) amplifier with cabinet, the 30-watt 1967 JMI Vox Conqueror amplifier with cabinet, the 22-watt 1967 Fender Deluxe Reverb (Blackface) amplifier, the 22-watt 1968 Fender Deluxe Reverb (Silverface) amplifier, or the 50-watt 1967 JMI Vox Defiant amplifier.

At this point, seven of the eight available tracks on the 3M M23 were filled. It is not known whether the undocumented work that followed occurred during the song's initial session or on the following day, but before work proceeded, a pair of tape reduction remixes were required.

Unlike a tape-to-tape reduction, where audio from one tape is sent to a second tape on a second machine, the tape reductions for *Dear Prudence* (there would ultimately be three of them) were internal. This means that the audio from any number of tracks was simply sent to an open track on the same reel of tape, on the same machine. There are both benefits and dangers to this approach. The benefit is that it's efficient; there are no additional tapes to manage, or machines to account for, align, etc. The danger is that once you have combined the audio, and erased the original performance by recording over it, there is no going back. What's done is done.

The first tape reduction involved combining Harrison's guitar performances to a single track (track 7). This made room for the next set of reductions that combined the acoustic guitar performances to a single track (track 8) and the lead vocal performances to another single track (track 3). As a result, five tracks of audio were now open for new work.

The second day of sessions for the song at Trident started with McCartney adding his 1966 Fender Jazz bass to the backing track, along with Lennon or Harrison on tambourine. (Mal Evans claimed in a November 1968 *Beatles Monthly Book* article that he and Lennon both played tambourines on the track.) For amplification, McCartney used either the 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet or the 30-watt 1966 JMI Vox UL430 Bass amplifier with cabinet.

Next, double-tracked backing vocals and handclaps were recorded by McCartney, Harrison, Beatles assistant Mal Evans, and Apple Records artist Jackie Lomax. (In the same *Beatles Monthly Book* article, Evan states that all four Beatles sang on the backing vocals, though Starr is yet to have returned to the band after quitting days earlier.)



McCartney also added drum fills to the last 1:09 of the song, creating the same sort of cacophony heard on the drum track for *Strawberry Fields Forever*. In a third internal tape reduction remix, McCartney's two drum parts were combined to a single track (track 6).

On August 30<sup>th</sup>, a final superimposition of McCartney on an unknown make or model jangle piano, some flugelhorn by an unknown Beatle, and additional electric guitar work by Harrison finished recording on the song.

The balance of the session was spent in creating both unnumbered mono and stereo remixes of the song.

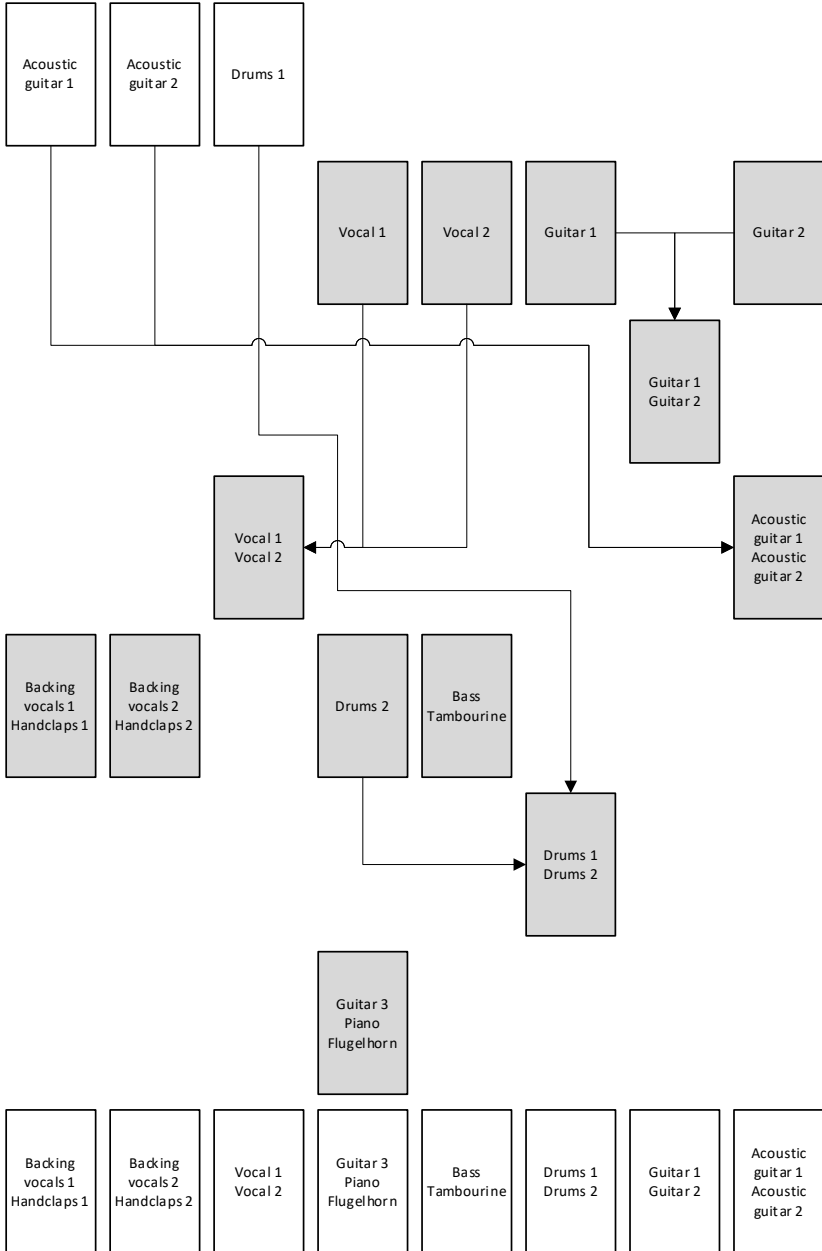
On October 5<sup>th</sup> at Trident, the first proper remix, remix mono (RM) 1, was created from take 1.

The technical staff at EMI didn't trust the results from Trident, and on October 13<sup>th</sup> in Studio 2, the song was remixed again, with ADT (artificial double tracking) added to both the backing vocals and handclaps. Both remix stereo (RS) 1 and remix mono (RM) 1 through 5 were created from take 1 (the previous RM 1 from Trident was discounted in the numbering sequence). RM 5 and RS 1 served as the respective mono and stereo release versions of the song.

August 28 thru  
October 13, 1968

# Dear Prudence

TRACK 1    TRACK 2    TRACK 3    TRACK 4    TRACK 5    TRACK 6    TRACK 7    TRACK 8



bt  
Take 1

Superimposition  
onto Take 1

Internal tape  
reduction (1)  
Take 1

Internal tape  
reduction (2)  
Take 1

Superimposition  
onto Take 1

Internal tape  
reduction (3)  
Take 1

Superimposition  
onto Take 1

rm  
REMIX

# Glass Onion

## Sessions

- September 11, 1968
- September 12, 1968
- September 13, 1968
- September 16, 1968
- September 26, 1968
- October 10, 1968

Beatles fans had always tried to read deeper meanings into their work, even the early love songs, whose meanings couldn't have been clearer. As their work became increasingly complex, the temptation to look for hidden meanings became even stronger. For those obsessed fans who thought The Beatles had answers to their cosmic questions, John Lennon threw fuel on the fire with *Glass Onion* (credited as usual to Lennon and McCartney). "Here's another clue for you all — the walrus was Paul..." What did it all mean? Just a good laugh, really.

The technical team for the song's first session on September 11<sup>th</sup>, 1968 at EMI Recording Studios, Studio 2, included AIR producer and Martin protégé Chris Thomas, balance engineer Ken Scott, and tape operator John Smith.

The song was recorded to the eight-track 3M M23 primary tracking machine.

The backing track featured Lennon on his 1964 Gibson J-160E acoustic guitar and guide vocals, McCartney on his 1966 Fender Jazz bass, Harrison on his 1957 Gibson Les Paul Goldtop ("Lucy") electric guitar, and Starr on an experimental drum set comprised of the bass drum from his 1964 Ludwig Oyster Black Pearl "Super Classic" drum set, combined with two stand-mounted rack toms, floor tom and stock Supra-Phonic 400 snare drum from his new 1967 Ludwig Hollywood Maple set, delivered on the first day of the session. The combined setup included two bass drums, three tom-toms, and three 20" Paiste Formula 602 cymbals.

For amplification, Harrison used one of four available amplifiers: the 85-watt 1966 Fender Showman (Blackface) amplifier with cabinet, the 30-watt 1967 JMI Vox Conqueror amplifier with cabinet, or the 1967 or 1968 22-watt Fender Deluxe Reverb (Silverface) amplifiers.

For bass amplification, McCartney used either the 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet or the 30-watt 1966 JMI Vox UL430 Bass amplifier with cabinet.

Thirty-four takes were created of the backing track, with take 33 being the best of these.

On September 12<sup>th</sup> in Studio 2, superimpositions onto take 33 followed, with Lennon's lead vocal (double-tracked in places and treated with ADT [artificial double tracking] on remix) and Starr on tambourine. The tambourine contribution would be wiped in favour of more work the following day.

The following day in Studio 2, Lennon added the studio's Steinway "Music Room" Model "B" Grand Piano, and Starr reinforced his drum part with an additional snare. Another Beatle added tambourine at the same time.

On September 16<sup>th</sup> in Studio 2, McCartney built on the self-referential nature of the song with two more superimpositions to take 33. First he added a Mellotron Mk.II "Sound Effects Console" to the song on the same track as the tambourine, just after the reference in the lyrics to *Strawberry Fields Forever*. The flute sound was the same used on the introduction to the 1967 song. The superimposition was not used in the final remixes.

Next McCartney and Chris Thomas double-tracked a recorder part following the reference in the lyrics to *The Fool On The Hill*. This performance would make the final remix.

On September 26<sup>th</sup>, in a Studio 2 control room session, Lennon created a 2:35 four-track sound effects tape for use on the song, comprised of a ringing telephone, the single note of an organ (possibly a Mellotron), an outtake from a BBC football broadcast, and the sound of a window/glass being broken. None of the sound effects made it onto the release versions of the song.

Before the session ended, remix mono (RM) 1 and 2 were created from take 33. The remixes included the new sound effects, edited to the end of the song .

On October 10<sup>th</sup> in Studio 2, the final superimpositions were made to take 33, with George Martin conducting a string section comprised of Henry Daytner, Eric Bowie, Norman Lederman, and Ronald Thomas on violins, Eldon Fox and Reginald Kilby on celli, and John Underwood and Keith Cummings on violas. With this work, recording on the track was completed.

Before the session ended, remix stereo (RS) 1 and 2 and RM 10 and 11 were created from take 33 (there were no additional mono remixes between RM 2 from September 26th and RM 10). RM 11 and RS 2 served as the respective mono and stereo release versions of the song.

# Martha My Dear

## Sessions

- October 4, 1968
- October 5, 1968
- October 7, 1968

Paul McCartney struck a fine balance with his second-to-last contribution to *The Beatles*. *Martha My Dear* (credited as usual to Lennon and McCartney) was sentimental, yes, but it was also a masterfully crafted and performed song. The recording of the song was a straightforward affair with only two sessions required to get it right. From all the work done in the first session, it's clear that Martin was ready for it in advance, with arrangements for strings and horns in hand.

The technical team for the song's first session on October 4<sup>th</sup>, 1968 at Trident Studios in west London, included producer George Martin and balance engineer Barry Sheffield.

The song was recorded to the eight-track Ampex AG-440-8 primary tracking machine.

The backing track featured McCartney on the studio's 1898 Bechstein Grand piano, with Harrison on his 1957 Gibson Les Paul Goldtop ("Lucy") electric guitar, and Starr on his 1964 Ludwig Oyster Black Pearl "Super Classic" drum set.

For amplification, Harrison had five rigs to choose from: the 85-watt 1966 Fender Showman (Blackface) amplifier with cabinet, the 30-watt 1967 JMI Vox Conqueror amplifier with cabinet, the 22-watt 1967 Fender Deluxe Reverb (Blackface) amplifier, the 22-watt 1968 Fender Deluxe Reverb (Silverface) amplifier, or the 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet.

Trident didn't document takes in the same way as EMI Recording Studios, and therefore, while take 1 is the backing track for the song, it was likely not the first take recorded. It probably represents the best of numerous passes at the track, each previous pass being erased by the one that followed. The backing track "take 1" would be the foundation for all work on the song.

Onto the take, McCartney superimposed his lead vocal with handclaps.

Next, George Martin conducted his string and horn arrangements for the song onto one track of the eight-track. The string section featured Dennis McConnell, Lou Sofier, and Les Maddox on

violins, Leo Brinbaum and Harry Myerscough on violas, and Reginald Kilbey and Fredrick Alexander on celli.

The horn section was comprised of Raymond Newman and David Smith on clarinets, Leon Calvert on trumpet and flugelhorn, Stanley Reynolds and Ronnie Hughes on trumpets, Tony Tunstall on French horn, Ted Barker on trombone, and Alf Reese on tuba. The parts were recorded across two tracks of the eight-track tape.

After the orchestral work was completed, McCartney double-tracked his lead vocal performance and handclaps.

The following day at Trident, an additional superimposition to take 1 included McCartney on his 1966 Fender Jazz bass.

For amplification, he used either the 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet or the 30-watt 1966 JMI Vox UL430 Bass amplifier with cabinet. With the superimposition, recording on the song was completed.

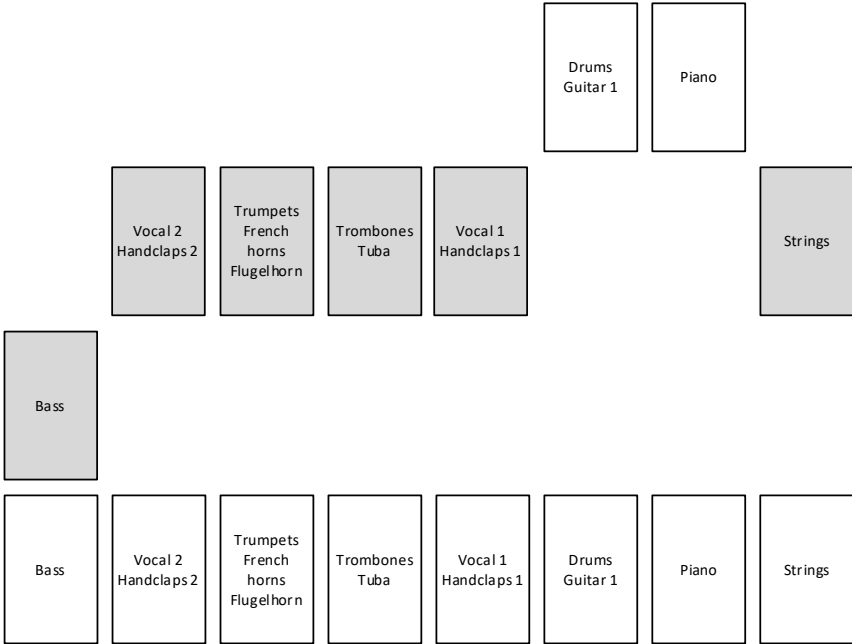
Before the session ended, remix mono (RM) 1 and remix stereo (RS) 1 were created from take 1.

Copies of the remixes were made of the song on October 7<sup>th</sup> at EMI Recording Studios, Studio 2. The need for copies was due to the fact that Trident's US tape standard (NAB – National Association of Broadcasters) differed from the UK standard (CCIR – Comité Consultatif International des Radiocommunications) used at EMI where the album would be banded. The difference between the two standards was their equalisation curve (meant to minimize tape hiss). Had the songs not been copied, the difference in their background noise profiles would potentially have been pronounced in the final releases.

October 4 thru 7, 1968

# Martha My Dear

TRACK 1    TRACK 2    TRACK 3    TRACK 4    TRACK 5    TRACK 6    TRACK 7    TRACK 8



bt  
Take 1

Superimposition  
onto Take 1

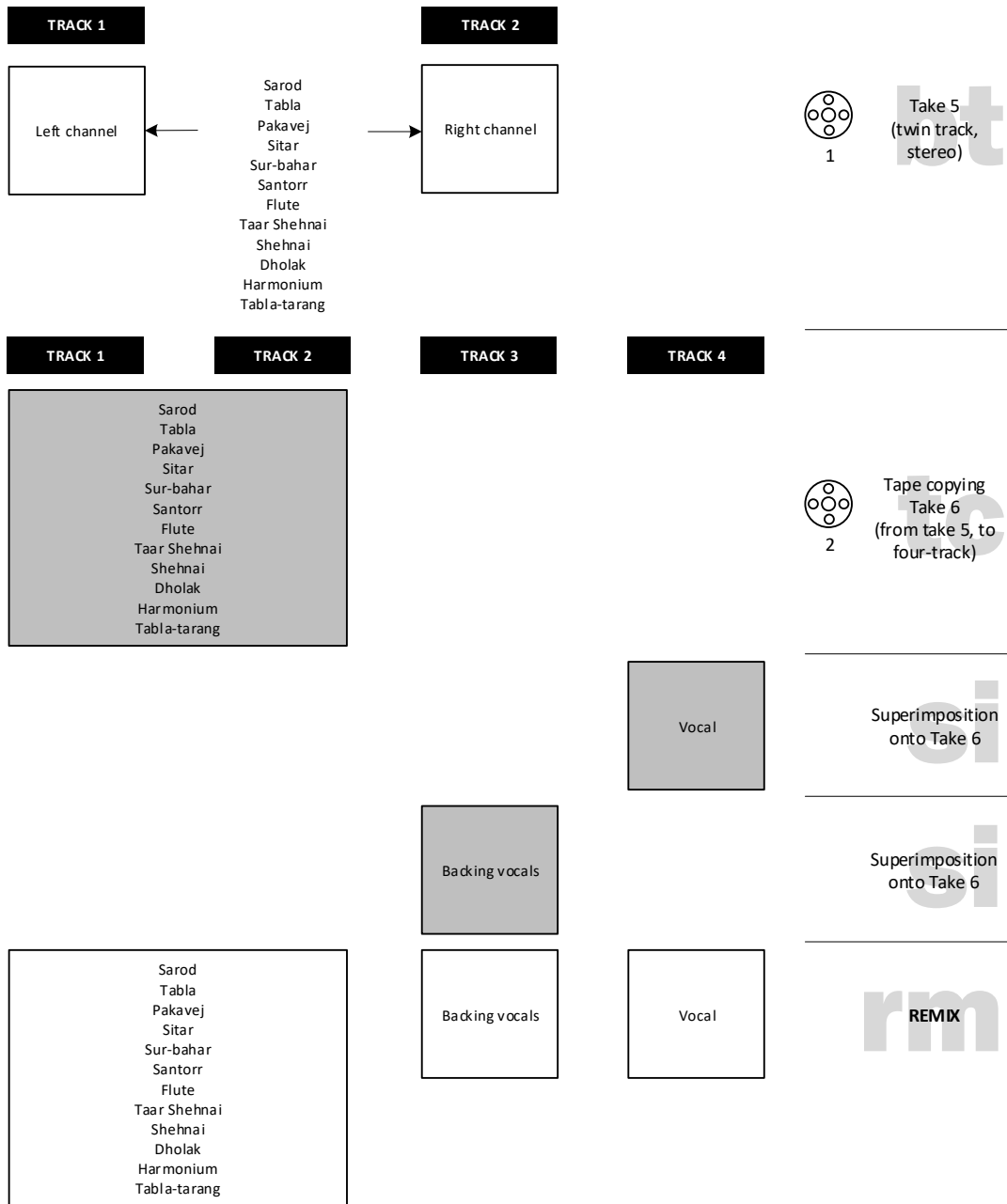
Superimposition  
onto Take 1

REMIX



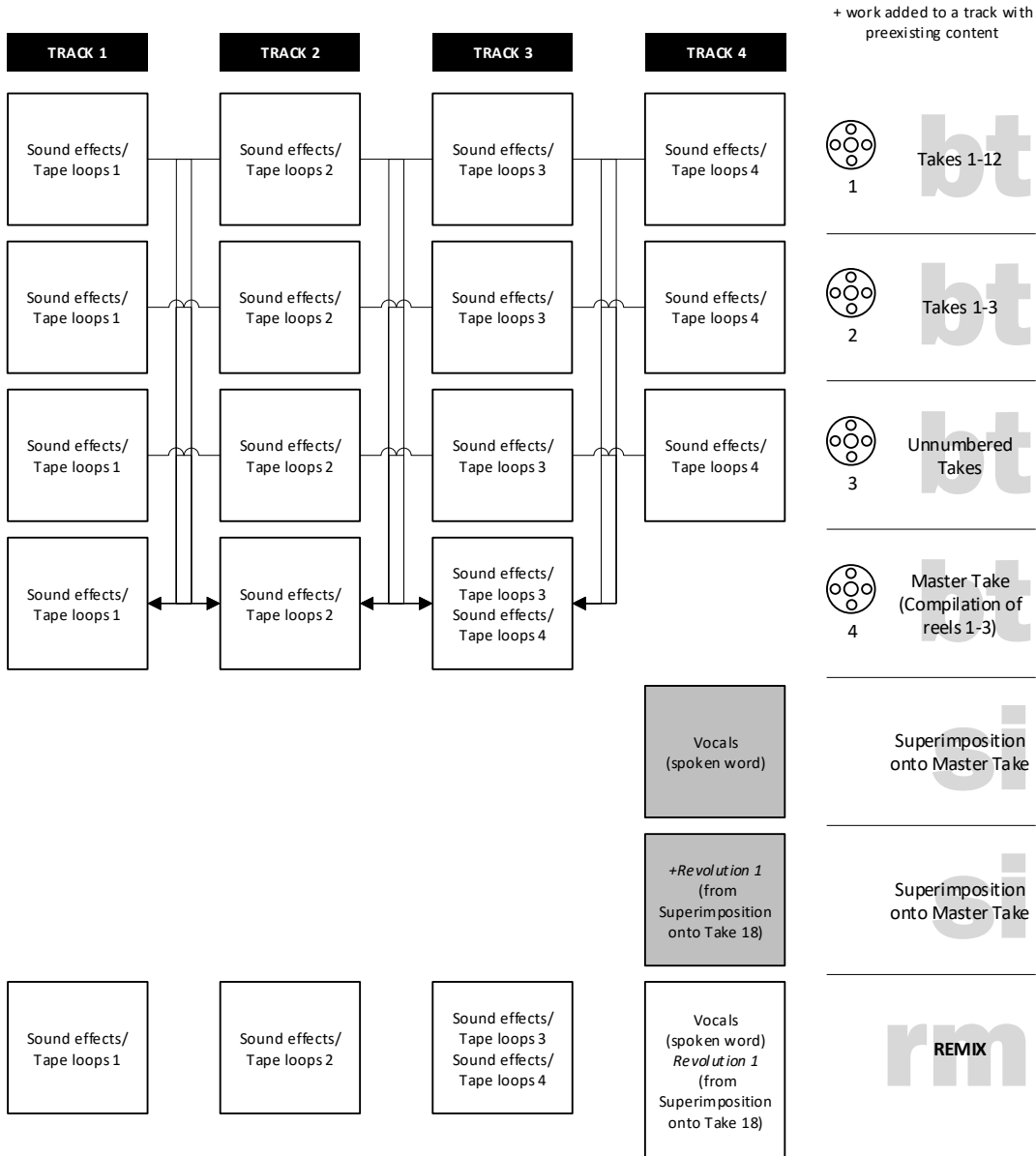
January 12, 1968 thru  
January 27, 1970

# The Inner Light



May 30 thru  
August 27, 1968

# Revolution 9



## ABOUT THE AUTHOR

Jerry Hammack is a Canadian-American musician, producer, recording engineer and author living in Toronto, Ontario, Canada.