

# The Beatles Recording Reference Manual

Volume 2

*Help!* through  
*Revolver*

(1965-1966)

## Corrigendum

Current as of Winter 2023

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Edited by  
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# 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 Two and its current edition. 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

- Ringo Starr’s Ludwig Set 4, which I previously believed to be in play for certain sessions, was actually used exclusively for live performances.
- *I Need You* and *You Like Me Too Much* were credited at times throughout the text to Lennon and McCartney, not the true writer, Harrison.
- 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 misspellings): 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.

**Sources** - Lewisohn, Mark (1). Pp. 200.

# 1965 Releases

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## April 6, 1965

### Location

London, England

### Release Title (version)(composer)

*Beatles For Sale* (mono)

Side A

*No Reply* (John Lennon and Paul McCartney)

*I'm A Loser* (John Lennon and Paul McCartney)

Side B

*Rock and Roll Music* (Chuck Berry)

*Eight Days A Week* (John Lennon and Paul McCartney)

### Publishers

- Northern Songs, Ltd., 1964 (*No Reply*, *I'm A Loser*, *Eight Days A Week*)
- Jewel Music (*Rock and Roll Music*)

### Release label

Parlophone

### Catalogue number

GEP 8931 (UK)

### Studio Personnel

- Producer: George Martin

## April 9, 1965

### Location

London, England

### Release Title (version)(composer)

*Ticket To Ride b/w Yes It Is* (mono) (John Lennon and Paul McCartney)

### Publisher

Northern Songs, LTD 1965

### Release label

Parlophone

### Catalogue number

R 5265 (UK)

### Studio Personnel

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 57.

June 4, 1965

**Location**

London, England

**Release Title (version)(composer)**

*Beatles For Sale* No. 2 (mono)

Side A

*I'll Follow The Sun* (John Lennon and Paul McCartney)

*Baby's In Black* (John Lennon and Paul McCartney)

Side B

*Words Of Love* (Buddy Holly)

*I Don't Want To Spoil The Party* (John Lennon and Paul McCartney)

**Publishers**

- Northern Songs, NCB 1964 (*I'll Follow The Sun*, *Baby's In Black*, *I Don't Want To Spoil The Party*)
- Southern Music (*Words Of Love*)

**Release label**

Parlophone

**Catalogue number**

GEP 8938 (UK)

**Studio Personnel**

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 200.

July 23, 1965

**Location**

London, England

**Release Title (version)(composer)**

*Help! b/w I'm Down* (mono) (John Lennon and Paul McCartney)

**Publisher**

Northern Songs, LTD 1965

**Release label**

Parlophone

**Catalogue number**

R 5305 (UK)

**Studio Personnel**

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 60.

August 6, 1965

**Location**

London, England

**Release Title (version)(composer)**

*Help!* (mono) (stereo)

Side A

*Help!* (John Lennon and Paul McCartney)

*The Night Before* (John Lennon and Paul McCartney)

*You've Got To Hide Your Love Away* (John Lennon and Paul McCartney)

*I Need You* (George Harrison)

*Another Girl* (John Lennon and Paul McCartney)

*You're Going To Lose That Girl* (John Lennon and Paul McCartney)

*Ticket To Ride* (John Lennon and Paul McCartney)

Side B

*Act Naturally* (Johnny Russell and Voni Morrison)

*It's Only Love* (John Lennon and Paul McCartney)

*You Like Me Too Much* (George Harrison)

*Tell Me What You See* (John Lennon and Paul McCartney)

*I've Just Seen A Face* (John Lennon and Paul McCartney)

*Yesterday* (John Lennon and Paul McCartney)

*Dizzy Miss Lizzy* (Larry Williams)

#### **Publishers**

- Northern Songs, NCB 1965 (*Help!*, *The Night Before, You've Got To Hide Your Love Away, I Need You, Another Girl, You're Going To Lose That Girl, Ticket To Ride, It's Only Love, You Like Me Too Much, Tell Me What You See, I've Just Seen A Face, Yesterday*)
- Essex Music (*Dizzy Miss Lizzy*)
- Lark Music, Ltd. (*Act Naturally*)

#### **Release label**

Parlophone

#### **Catalogue number**

- (mono) PMC 1255 (UK)
- (stereo) PCS 3071 (UK)

#### **Studio Personnel**

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 62.

## December 3, 1965

#### **Location**

London, England

#### **Release Title (version)(composer)**

*We Can Work It Out b/w Day Tripper* (mono)  
(John Lennon and Paul McCartney)

#### **Publisher**

Northern Songs, LTD 1965

#### **Release label**

Parlophone

#### **Catalogue number**

R 5389 (UK)

#### **Studio Personnel**

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 69.

## December 3, 1965

### Location

London, England

### Release Title (version)(composer)

*Rubber Soul* (mono) (stereo)

### Side A

*Drive My Car* (John Lennon and Paul McCartney)

*Norwegian Wood (This Bird Has Flown)* (John Lennon and Paul McCartney)

*You Won't See Me* (John Lennon and Paul McCartney)

*Nowhere Man* (John Lennon and Paul McCartney)

*Think For Yourself* (George Harrison)

*The Word* (John Lennon and Paul McCartney)

*Michelle* (John Lennon and Paul McCartney)

### Side B

*What Goes On* (John Lennon, Paul McCartney, and Richard Starkey)

*Girl* (John Lennon and Paul McCartney)

*I'm Looking Through You* (John Lennon and Paul McCartney)

*In My Life* (John Lennon and Paul McCartney)

*Wait* (John Lennon and Paul McCartney)

*If I Needed Someone* (George Harrison)

*Run For Your Life* (John Lennon and Paul McCartney)

### Publisher

Northern Songs, NCB 1965

### Release label

Parlophone

### Catalogue number

- (mono) PMC 1267 (UK)
- (stereo) PCS 3075 (UK)

### Studio Personnel

- Producer: George Martin

Sources - Lewisohn, Mark (1). Pp. 69.

## December 6, 1965

### Location

London, England

### Release Title (version)(composer)

*The Beatles Million Sellers* (mono)

### Side A

*She Loves You* (John Lennon and Paul McCartney)

*I Want To Hold Your Hand* (John Lennon and Paul McCartney)

### Side B

*Can't Buy Me Love* (John Lennon and Paul McCartney)

*I Feel Fine* (John Lennon and Paul McCartney)

### Publisher

Northern Songs, Ltd. 1963, 1964 (*She Loves You*, *I Want To Hold Your Hand*, *Can't Buy Me Love*, *I Feel Fine*)

**Release label**

Parlophone

**Catalogue number**

GEP 8946 (UK)

**Studio Personnel**

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 200.

# Act Naturally

## Sessions

- June 17, 1965
- June 18, 1965

The upcoming *Help!* album still needed a vocal contribution from Starr (*If You've Got Trouble* had been set aside at this point). Taking a cue from Starr's love of country music, Martin settled on a cover of *Act Naturally*, a song written by Johnny Russell and Voni Morrison and released originally as a *Billboard* country singles number 1 song in 1963 by Buck Owens and the Buckaroos. The song was one of two new songs tracked during the final recording session for the album on June 17<sup>th</sup>, 1965 at EMI Recording Studios, Studio 2.

The technical team for the session included producer George Martin, balance engineer Norman Smith, and tape operator Phil McDonald

The song was recorded to the Studer J-37 four-track primary tracking machine.

The backing track featured Starr on his 1964 Ludwig Oyster Black Pearl “Super Classic” drum set and lead vocals, Harrison on the 1965 Framus Hootenanny 5/024 (12-string) acoustic guitar, and McCartney on his 1962-1963 Hofner 500/1 bass and backing vocals.

The Framus guitar was mic'ed acoustically with a Neumann U48 microphone. For bass amplification, McCartney used the 100-watt 1963 Vox AC100 with a Vox AC100 custom cabinet.

It took 13 takes to perfect the backing track, with Starr and McCartney only adding the vocals on the final take.

Superimpositions onto take 13 followed, featuring Starr on rim shot percussion and Harrison on his 1963 Gretsch G6119 Chet Atkins Tennessean electric guitar with Gretsch Bigsby vibrato (played through a 30-watt 1963 JMI Vox AC30/6 Twin Treble amplifier). The guitar was double-tracked in places on another superimposition to complete the recording.

On June 18<sup>th</sup> in a Studio 2 control room session, both remix mono (RM) 1 and remix stereo (RS) 1 were created from take 13. These remixes served as the mono and stereo release versions of the song.

June 17 thru 18, 1965

Act Naturally

TRACK 1

Acoustic guitar  
Bass  
Drums

TRACK 2

Guitar 2

TRACK 3

Vocal  
Backing vocals

TRACK 4

Guitar 1  
Percussion

Acoustic guitar  
Bass  
Drums

Guitar 2

Vocal  
Backing vocals

Guitar 1  
Percussion

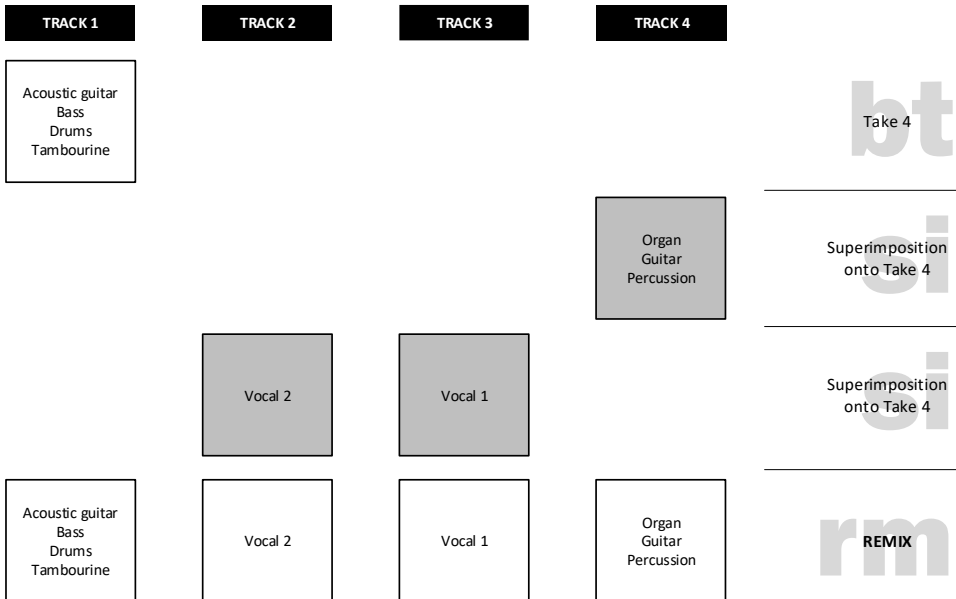
bt  
Take 13

Superimposition  
onto Take 13

rm  
REMIX

October 24 thru  
November 15, 1965

# I'm Looking Through You



# 1966 Releases

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## March 4, 1966

### Location

London, England

### Release Title (version)(composer)

*Yesterday* (mono)

Side A

*Yesterday* (John Lennon and Paul McCartney)

*Act Naturally* (Johnny Russell and Voni Morrison)

Side B

*You Like Me Too Much* (George Harrison)

*It's Only Love* (John Lennon and Paul McCartney)

### Publishers

- Northern Songs, Ltd. 1965 (*Yesterday*, *You Like Me Too Much*, *It's Only Love*)
- Bluebook Music Publishing (*Act Naturally*)

### Release label

Parlophone

### Catalogue number

GEP 8948 (UK)

### Studio Personnel

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 200.

## June 10, 1966

### Location

London, England

### Release Title (version)(composer)

*Paperback Writer b/w Rain* (mono) (John Lennon and Paul McCartney)

### Publisher

Northern Songs, LTD 1966

### Release label

Parlophone

### Catalogue number

R 5452 (UK)

### Studio Personnel

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 83.

## July 8, 1966

### Location

London, England

### Release Title (version)(composer)

*Nowhere Man* (mono)

Side A

*Nowhere Man* (John Lennon and Paul McCartney)

*Drive My Car* (John Lennon and Paul McCartney)

Side B

*Michelle* (John Lennon and Paul McCartney)

*You Won't See Me* (John Lennon and Paul McCartney)

**Publisher**

Northern Songs, Ltd. 1965

**Release label**

Parlophone

**Catalogue number**

GEP 8952 (UK)

**Studio Personnel**

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 200.

August 5, 1966

**Location**

London, England

**Release Title (version)(composer)**

*Eleanor Rigby b/w Yellow Submarine* (mono)  
(John Lennon and Paul McCartney)

**Publisher**

Northern Songs, LTD 1966

**Release label**

Parlophone

**Catalogue number**

R 5493 (UK)

**Studio Personnel**

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 84, 85.

August 5, 1966

**Location**

London, England

**Release Title (version)(composer)**

*Revolver* (mono) (stereo)

Side A

*Taxman* (George Harrison)

*Eleanor Rigby* (John Lennon and Paul McCartney)

*I'm Only Sleeping* (John Lennon and Paul McCartney)

*Love You To* (George Harrison)

*Here, There and Everywhere* (John Lennon and Paul McCartney)

*Yellow Submarine* (John Lennon and Paul McCartney)

*She Said She Said* (John Lennon and Paul McCartney)

Side B

*Good Day Sunshine* (John Lennon and Paul McCartney)

*And Your Bird Can Sing* (John Lennon and Paul McCartney)

*For No One* (John Lennon and Paul McCartney)  
*Doctor Robert* (John Lennon and Paul McCartney)  
*I Want To Tell You* (George Harrison)  
*Got To Get You Into My Life* (John Lennon and Paul McCartney)  
*Tomorrow Never Knows* (John Lennon and Paul McCartney)

**Publisher**

Northern Songs, LTD 1966

**Release label**

Parlophone

**Catalogue number**

- PMC 7009 (mono) (UK)
- PMS 7009 (stereo) (UK)

**Studio Personnel**

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 84, 85.

December 9, 1966

**Location**

London, England

**Release Title (version)(composer)**

*A Collection Of Beatles Oldies* (mono) (stereo)

**Side A**

*She Loves You* (John Lennon and Paul McCartney)

*From Me To You* (John Lennon and Paul McCartney)  
*We Can Work It Out* (John Lennon and Paul McCartney)  
*Help!* (John Lennon and Paul McCartney)  
*Michelle* (John Lennon and Paul McCartney)  
*Yesterday* (John Lennon and Paul McCartney)  
*I Feel Fine* (John Lennon and Paul McCartney)  
*Yellow Submarine* (John Lennon and Paul McCartney)

**Side B**

*Can't Buy Me Love* (John Lennon and Paul McCartney)  
*Bad Boy* (Larry Williams)  
*Day Tripper* (John Lennon and Paul McCartney)  
*A Hard Day's Night* (John Lennon and Paul McCartney)  
*Ticket To Ride* (John Lennon and Paul McCartney)  
*Paperback Writer* (John Lennon and Paul McCartney)  
*Eleanor Rigby* (John Lennon and Paul McCartney)  
*I Want To Hold Your Hand* (John Lennon and Paul McCartney)

**Publisher**

- Northern Songs, NCB 1963-1966  
(*She Loves You, From Me To You, We Can Work It Out, Help!, Michelle, Yesterday, I Feel Fine, Yellow Submarine, Can't Buy Me Love, Day Tripper, A Hard Day's Night, Ticket To Ride, Paperback Writer, Eleanor Rigby, I Want To Hold Your Hand*)

- Venice Music, LTD. (*Bad Boy*)

**Release label**

Parlophone

**Catalogue number**

- (mono) PMC 7016 (UK)

- (stereo) PMS 7016 (UK)

**Studio Personnel**

- Producer: George Martin

**Sources** - Lewisohn, Mark (1). Pp. 90

# Tomorrow Never Knows

## Sessions

- April 6, 1966
- April 7, 1966
- April 22, 1966
- April 27, 1966
- May 16, 1966
- June 6, 1966
- June 22, 1966

The first song recorded for *Revolver* on April 6<sup>th</sup>, 1966 at EMI Recording Studios, Studio 3, was John Lennon and Paul McCartney's *Tomorrow Never Knows* (initially titled *Mark I*). The song's lyrics are Lennon's take on Harvard professor Timothy Leary's interpretation of the ancient *Tibetan Book Of The Dead*, the seriousness of which was defused by a title courtesy of another Ringo-ism (a la *A Hard Day's Night*). In the context of Lennon's final contribution to *Rubber Soul*, *Girl*, the stylistic leap is extraordinary.

With one song, The Beatles sent a clear message that having conquered the world of pop music, they had earned the opportunity to do whatever they wanted. This was new ground for a recording artist and the mould they broke, for better and for worse, would never be put back together again.

The technical team for the song's first session included producer George Martin, newly promoted balance engineer Geoff Emerick, and tape operator Phil McDonald.

Emerick in particular facilitated The Beatles' new ambitions with his willingness to break from the engineering traditions he learned from Norman Smith and his own spirit of experimentation. *Tomorrow Never Knows* was a baptism by fire as challenge after challenge set before him required new technical solutions to achieve sounds that had never been recorded.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track for take 1 featured Lennon on guitar, Harrison on one of three electric guitars available to him (a 1961 Fender Stratocaster with synchronized tremolo, 1964 Gibson SG Standard with Gibson Maestro Vibrola vibrato, and a 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato), and Starr on his 1964 Ludwig Oyster Black Pearl "Super Classic" drum set.

For amplification, Harrison used either the 120-watt 1966 JMI Vox 7120 amplifier with a cabinet or the 85-watt 1966 Fender Showman (Blackface) amplifier with cabinet. (Howlett claims one of the guitars was played through the studio's 1965 Lowrey DSO-I Heritage Organ Leslie speaker, while the other had a fuzz tone applied.)

The backing track utilized frequency control (varispeed), recorded at a speed faster than the playback speed. On playback at a normal, slower speed, the song sounded thicker and deeper.

On the track, Harrison stabbed a highly distorted, tremolo electric guitar, while Lennon played a simple four-note melody, and Starr held down a basic backbeat with his snare drum, bass drum, and ride cymbal. It is repetitive and hypnotic.

With take 1 complete, the song was the subject of two superimpositions. Starr added an drum part, this time recorded at normal speed, and Lennon added his lead vocal, amplified through a Leslie speaker cabinet.

The cabinet provided a flange-like distortion to whatever sound was routed through it. Originally intended for use with the Hammond organ, in The Beatles' hands it found a wide range of applications.

With the superimpositions onto take 1 completed, the band moved onto a completely different backing track for the song. Take 2 broke down, but take 3 became the basis of the finished song.

This time the track featured a heavy backbeat by Starr and McCartney on his 1964 Rickenbacker 4001S bass (played through either the 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet, or the 120-watt 1966 Vox 4120 bass amplifier with cabinet). With take 3 completed, the session ended.

The next day in Studio 2, Lennon superimposed a new lead vocal superimposition to take 3. But the real challenge of the session was just beginning. He, along with McCartney and Harrison came armed with homework that ensured the song's place in history; tape loops that they had produced in their home studios. Tape loops are short segments of audiotape containing previously recorded sounds that are connected in a continuous loop at the top and tail of the tape. The repetition of the "loop" creates an audio pattern, the duration determined by the length of the tape. The sound effects heard on the song were all created in this manner.

For the song, Martin selected 16 of the tape loops for consideration. These were further narrowed down to the five to eight loops that appear on the final track (Martin recalled the higher number).

The five tape loops that have been identified included: McCartney's laughter, sped up and sounding like a seagull; a B-flat major orchestral chord from a Jan Sibelius recording; two sitar parts, played backwards; and miscellaneous Mellotron sounds.

The loops were created using 1/4" Brenell Mark 5 Type M Series 3 two-track machines. EMI Recording Studios wasn't equipped with the Brenell machines, so five compatible 1/4" EMI BTR3 stereo machines located throughout the studio had to be employed to play back the selected loops, manned by many technicians. The loops could not be fed like a normal tape (where a primary reel feeds a take-up reel), so engineers were employed to hold the tapes taut with pencils serving as capstans to feed them to the playback heads.

The output of the machines was fed into the Studio 2 control room and combined via both the REDD console and the EMI RS144 4-Way Mixer/Premix on their way to the primary tracking machine. Emerick and many other hands brought the innovative sounds in and out of the mix as they were sent to the Studer four-track. The complex superimposition completed work on the song for the session.

On April 22<sup>nd</sup>, the band returned to Studio 2 for a final round of superimpositions onto take 3, filling the last open track of the four-track machine.

Lennon replaced his lead vocal from the 7<sup>th</sup> with two new vocals. The first utilized a more standard approach than his take 1 version; the performance, appearing at the top of the song, doesn't use the Leslie effect at all. The vocal for the back half of the song ran with the original inspiration, utilizing the Leslie 122 speaker cabinet. Martin recalled the vocal leads "...87 seconds into the song, then (the new vocal by Lennon was) recorded through another microphone placed outside the Leslie speaker." Both performances were tracked with Harrison on and tamboura (a traditional Indian four or five-stringed droning instrument) onto track 4.

Other brush strokes were added to finish the masterpiece including Lennon's double tracked lead vocal, Harrison on sitar (a 1966 Rikhi Ram Sitar made by Bishan Dass Sharma), McCartney's backwards lead guitar (played on his 1962 Epiphone ES-230TD, Casino electric guitar with Selmer Bigsby B7 vibrato through his 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet), Starr on tambourine, McCartney on the studio's 1905 Steinway Vertegrand (the "Mrs. Mills" upright piano), and an unknown musician on organ. With these additions, recording on the song was finally completed.

On April 27<sup>th</sup> in a Studio 3 control room session, remix mono (RM) 1 through 9 were created from take 3. RM 8 was the best of these remixes. On May 16<sup>th</sup> in Studio 2, a backup copy was made of RM 8.

On June 6<sup>th</sup> in a Studio 3 control room session, RM 10 through 12 were created from take 3. RM 11 was the best of these remixes.

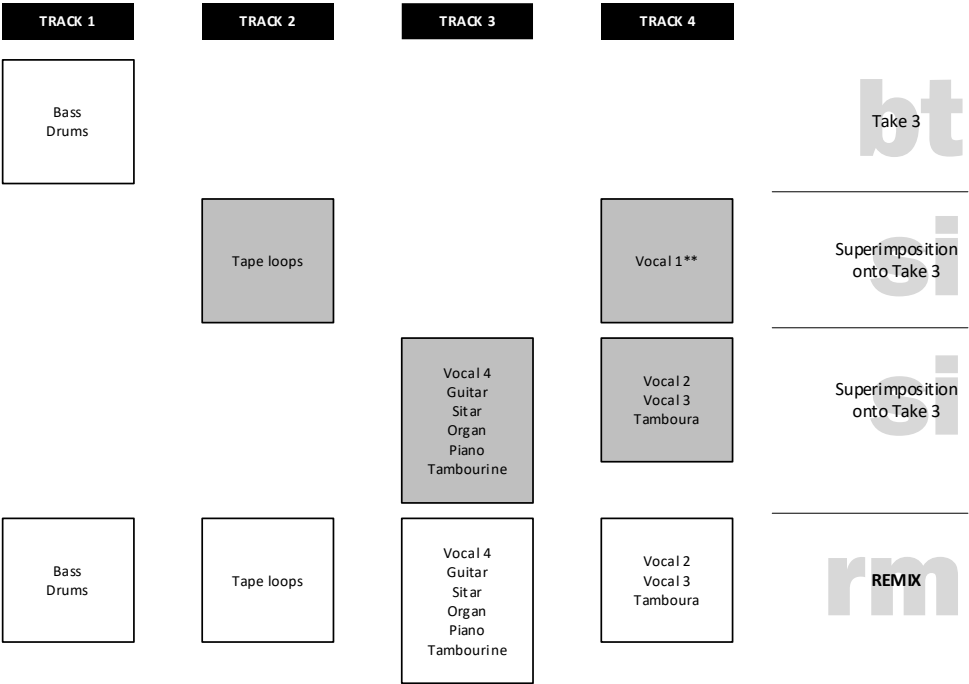
When it came time to choose a mono master version for release RM 11 was originally chosen though it was only used for the first UK pressing of the *Revolver* album. After the first pressing, Martin changed his mind about the best version of the song, and RM 8 was used for all further mono releases.

On June 22<sup>nd</sup> in Studio 2, remix stereo (RS) 1 through 6 were created from take 3. Of these, RS 6 was considered best and served as the stereo release version of the song.

April 6 thru  
June 22, 1966

# Tomorrow Never Knows

\*\*work not used or erased



# Got To Get You Into My Life

## Sessions

- April 7, 1966
- April 8, 1966
- April 11, 1966
- April 25, 1966
- May 18, 1966
- June 17, 1966
- June 20, 1966
- June 22, 1966

The second song recorded for the upcoming *Revolver* album got its start at EMI Recording Studios, Studio 3, on April 7<sup>th</sup>, 1966 in another evening session. With work on the album, progressively late nights in the studio became the norm.

The Beatles had the ability to absorb influences from anywhere and make them their own. Whether it was straight rock and roll, country and western, or in the case of John Lennon and Paul McCartney's *Got To Get You Into My Life*, melding the deep, southern American soul of Memphis' Stax label with their own impeccable pop sensibilities to create something new.

The technical team for the song's first session included producer George Martin, balance engineer Geoff Emerick, and tape operator Phil McDonald.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track featured McCartney on his 1964 Epiphone FT-79N Texan acoustic guitar and lead vocals, Starr on his 1964 Ludwig Oyster Black Pearl “Super Classic” drum set, Lennon and Harrison on backing vocals and tambourine, and George Martin on a 1965 Vox V303J Continental II Organ.

The Vox organ was amplified through a 30-watt 1963 JMI Vox AC30/6 Twin Treble amplifier.

The first version of the song was completed in five takes, with take 5 being the best. In a variation from the released version, the arrangement focused on the offbeat and was filled with backing vocal accents. In particular, a breakdown in the middle-eight featured McCartney, Lennon, and

Harrison singing in three-part a cappella harmony, “I need your love, I need your love, I need your love...”.

While take 5 was a great version in its own right, it ended up being put aside, and the song was remade.

On April 8<sup>th</sup>, the band moved back to Studio 2 to start the remake, beginning with take 6. This time the backing track featured McCartney on his 1964 Rickenbacker 4001S bass, Lennon on either his 1961 Fender Stratocaster electric guitar with synchronized tremolo or 1965 Epiphone ES-230TD, Casino electric guitar, Harrison (on a separate track) experimenting with fuzz tones on one of three electric guitars available to him (a 1961 Fender Stratocaster with synchronized tremolo, 1964 Gibson SG Standard with Gibson Maestro Vibrola vibrato, or a 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato), and Starr on drums.

For amplification, Lennon and Harrison used either the 120-watt 1966 JMI Vox 7120 amplifier or the 85-watt 1966 Fender Showman (Blackface) amplifier with cabinet. For bass amplification, McCartney used either the 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet or the 120-watt 1966 Vox 4120 bass amplifier with cabinet. The Vox organ was amplified through the 30-watt 1963 JMI Vox AC30/6 Twin Treble amplifier.

Three takes of the new backing track were made (takes 6 through 8), with take 8 considered the best. Recorded with frequency control (varispeed) at a slower than normal tape speed, the backing track played back a semitone higher in pitch as well as faster than the original performance.

This backing track did make the cut, and served as the foundation for the release version of the song.

Three days later on April 11<sup>th</sup> the band returned to Studio 2 for a session that included superimpositions onto take 8. Harrison added more fuzz guitar to track 2. On track 3, McCartney added another bass part, along with backing vocals by Lennon and Harrison. Next, McCartney added his lead vocal to track 4, though it would be improved upon in a later session. These additions completed recording for the time being.

On April 25<sup>th</sup> in Room 65 (a remix-only room on the EMI Studios grounds next to the main studios), remix mono (RM) 1 and 2 were created from take 8. The rough remixes were used to cut acetates from, likely for Martin's use in scoring the horn section for the song.

On May 18<sup>th</sup>, work continued on the song in Studio 2 with more superimpositions onto take 8. First, the horn section was tracked, with Martin conducting Eddie Thornton on his Olds Super trumpet, Ian Hammer and Les Condon also on trumpets, Alan Branscombe on tenor saxophone, and Peter Coe on tenor saxophone. (Coe played with Thornton in *Georgie Fame* and *The Blue Flames*.) Their Stax-flavoured additions opened the song and completely transformed its feel. The sections were recorded with frequency control (varispeed) at the same tempo as the original backing track and used the last open track of the four-track reel.

With the tape full, a reduction remix was required. Three takes were attempted (takes 9 through 11), with the first, take 9, being the best. Guitar, bass and drums were carried forward as is, while the two brass superimpositions were combined onto track 2. Surprisingly, superimpositions made on April 11<sup>th</sup> were scrapped during this reduction remix. Once complete, two tracks were open for other work.

Two superimpositions onto take 9 followed, the first with McCartney's improved lead vocals onto track 4 (again utilizing frequency control, the vocal was recorded at a slower than normal speed and played back at a slightly higher pitch). The work was double tracked on track 3, with Starr on tambourine. The second superimposition to track 3 included Lennon on the Vox organ.

Before the evening ended, remix mono (RM) 1 and 2 were created from take 9.

On June 17<sup>th</sup>, again in Studio 2, the final addition to the song featured McCartney and Harrison's brief lead guitar part, heard starting at around 1:44. The part wiped McCartney's double-tracked vocal and Starr's tambourine in that section of the song. With this, recording was finally completed.

In the same session, RM 3 through 7 were created from take 9, RM 7 being considered the best of the remixes. McCartney's vocals during the fade out were taken from both his take 4 and take 3 performances. (Because of this, there are some small differences between the mono and stereo remixes of the ending vocals.)

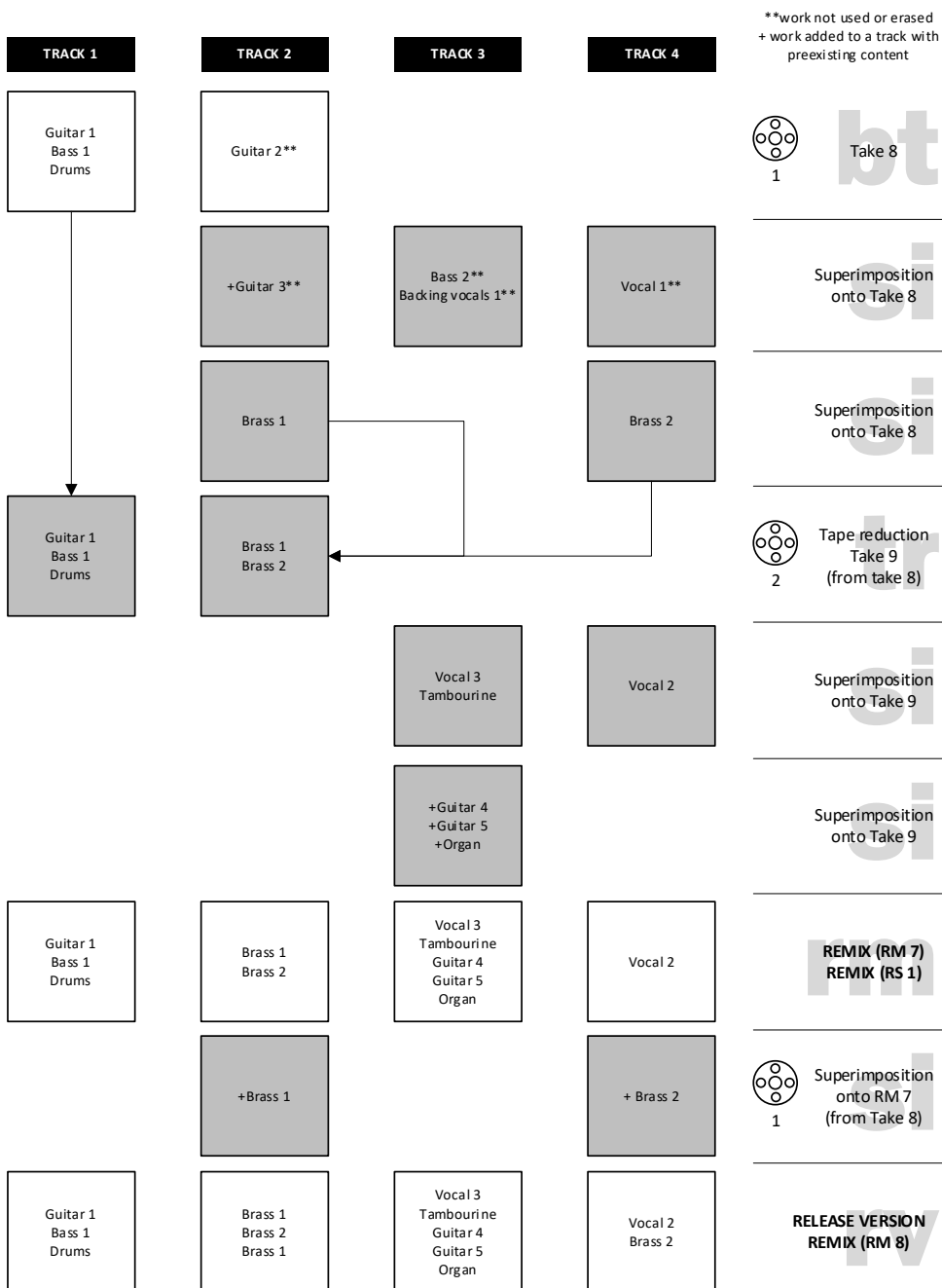
Upon review, Martin felt the remix could be improved upon, and on June 20<sup>th</sup> in a Studio 1 control room session, it was.

The improvement came when Martin and the technical team made a copy of RM 7 and created a new remix that included the brass superimposition from take 8 slightly out of sync with RM 7. This version became RM 8 and served as the mono release version of the song.

On June 22<sup>nd</sup> in a Studio 3 control room session, remix stereo (RS) 1 was created from take 9 and served as the stereo release version of the song. This version did not include the extra horns featured in the mono remix.

April 7 thru  
June 22, 1966

# Got To Get You Into My Life



# Love You To

## Sessions

- April 11, 1966
- April 13, 1966
- April 25, 1966
- May 16, 1966
- June 21, 1966

George Harrison had explored Indian instrumentation and themes before with his sitar work on both *Norwegian Wood (This Bird Has Flown)* from *Rubber Soul* and the sitar loops and accents provided to *Tomorrow Never Knows*. On April 11th, 1966 at EMI Recording Studios, Studio 2, Harrison took this interest and ran with it. *Love You To* (initially untitled, it was bestowed the working title of *Granny Smith*, after the apple of the same name) was the first song he composed intentionally as an Indian-style “raga”.

The technical team for the song's first session included producer George Martin, balance engineer Geoff Emerick, and tape operator Phil McDonald.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track featured Harrison on his 1962 Gibson J-160E acoustic guitar and lead vocals, and McCartney on backing vocals. The duo made short work of the backing track, completing it in six takes, with take 6 being the best. (An initial take 3 backing track had been superimposed with double-tracked vocal and backing vocal, as well as sitar, before being abandoned.)

Superimpositions onto take 6 followed with Harrison adding a second vocal and acoustic guitar on one track and his impressive sitar part, played on his 1966 Rikhi Ram Sitar, along with McCartney on tamboura and Anil Bhagwat, a member of London's Asian Music Circle on tabla percussion (the Asian Music Circle was an association of Indian musicians that promoted that region's music in the West).

Emerick recalls mic'ing the tabla with a ribbon microphone, placed very close. As another example of his departure from Norman Smith's recording techniques, ribbon microphones wouldn't normally be used in close proximity as they were sensitive to rapid changes in air pressure such as those created by a drum (the tabla being a pair of hand drums), and prone to damage.

Finally, Harrison added some fuzz guitar on one of three electric guitars available to him (a 1961 Fender Stratocaster with synchronized tremolo, a 1964 Gibson SG Standard with Gibson Maestro Vibrola vibrato, and a 1965 Epiphone ES-230TD) along with additional sitar.

For amplification, he used either the 120-watt 1966 JMI Vox 7120 amplifier with a cabinet or the 85-watt 1966 Fender Showman (Blackface) amplifier with cabinet. The fuzz tone came from either an EMI “fuzz box” or third-party gear like the WEM Pep Rush, or Vox Tone Bender Professional MKII (all were available to Harrison).

Work on the song picked up again on April 13th in Studio 3 with a tape reduction remix of take 6. Only one take of the remix was required (take 7), which opened two tracks for more work. Next, superimpositions onto take 7 included McCartney double tracking his vocal on track 3 and Starr adding tambourine along with more fuzz guitar by Harrison on track 4. These additions completed recording on the song.

The session ended with remix mono (RM) 1 through 3 created from take 6. RM 3 was considered the best remix at this point.

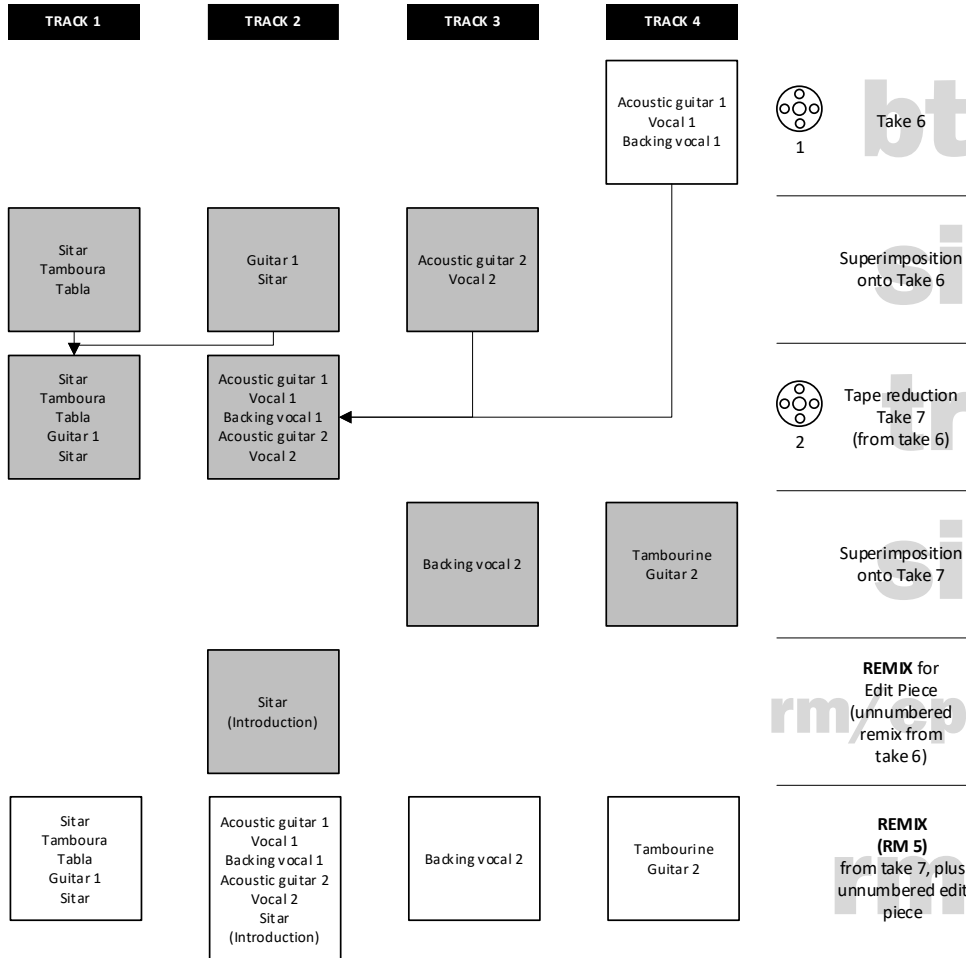
On April 25th in Room 65 (a small remix-only room in a small row of buildings next to the main EMI Studios), an unnumbered mono remix was created from Harrison's sitar introduction for the song recorded on April 11th. The remix was used as an edit piece and comprised the first 0:34 seconds of the final remixes.

On May 16th in Studio 2, tape copies of RM 3 were made, renamed RM 4 and RM 5 for the US and UK markets. Both copies now included the April 25th edit piece. While RM 4 went unreleased in the US, RM 5 served as the mono release version of the song in the UK.

On June 21st in a Studio 3 control room session, remix stereo (RS) 1 through 3 were created from take 7. In a complex assembly, an edit of all three remixes, plus the edit piece served as the stereo release version of the song.

April 11 thru  
June 21, 1966

# Love You To



April 11 thru  
June 21, 1966

# Love You To

## TRACK 1

Sitar  
Tamboura  
Tabla  
Guitar 1  
Sitar

## TRACK 2

Acoustic guitar 1  
Vocal 1  
Backing vocal 1  
Acoustic guitar 2  
Vocal 2  
Sitar  
(Introduction)

## TRACK 3

Backing vocal 2

## TRACK 4

Tambourine  
Guitar 2

**REMIX**  
(RS 1, 2 and 3)



**RELEASE VERSION**  
(EDIT OF RS 1, 2  
and 3)

# Paperback Writer

## Sessions

- April 13, 1966
- April 14, 1966
- October 31, 1966

Don't ever forget that before McCartney played bass for The Beatles, he played guitar for The Beatles. As the fourth song recorded for *Revolver* showed, he had an ear for fine hooks on the instrument. John Lennon and Paul McCartney's *Paperback Writer* is a showcase of not only McCartney's guitar chops, but also his ability to craft unique song narratives – in this case using the form of a letter to a publisher to tell his story. Lennon and Harrison weren't the only ones innovating in 1966.

The technical team for the song's first session on April 13<sup>th</sup>, 1966 at EMI Recording Studios, Studio 3, included producer George Martin, balance engineer Geoff Emerick, and tape operator Richard Lush.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track featured McCartney on his 1962 Epiphone ES-230TD, Casino electric guitar with Selmer Bigsby B7 vibrato and Starr on his 1964 Ludwig Oyster Black Pearl “Super Classic” drum set. It is unclear whether Harrison or Lennon provided the second guitar part (Harrison on his 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato, while Lennon was photographed in the session on his 1963 Gretsch PX6120 Nashville); whichever of the two was not the secondary guitarist provided tambourine to the track.

For amplification, Lennon/Harrison used the 120-watt 1966 JMI Vox 7120 amplifier with a cabinet and McCartney used his 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet.

As with *Tomorrow Never Knows*, Emerick recalls experimenting with mic'ing Starr's tom toms from both above and below during this session. While the AKG D19c microphones were standard for overhead drum mics, Emerick chose the studio's STC 4038 microphones for use below the toms.

Only two takes were required to perfect the backing track, take 2 being the best. With the backing track completed, work on the song ended for the session.

The following day in Studio 3, numerous superimpositions were made onto take 2. McCartney added his 1963 Rickenbacker 4001S bass guitar, (played through either the 50 watt 1963 Fender Bassman 6G6-A amplifier with cabinet, or the 120 watt 1966 Vox 4120 bass amplifier with cabinet). In order to enhance the sound of the bass, Emerick and Ken Townsend tried something radical – they used the studio’s playback monitor (the RLS10 - “White Elephant”) as a microphone to record Paul’s bass cabinet. The idea behind this was that the large diaphragm of the speaker (a 15” Warfdale) would be well suited to picking up the low frequencies of the bass amplifier.

Next, George Martin experimented with two different keyboard parts for the song. Audio evidence from the tail of take 2 and notes from the session's tape operator, Phil McDonald, show the presence of a Challen Studio Piano (known as a “jangle piano”) recorded through a Leslie 122 speaker cabinet as one of the attempted superimpositions onto the song, though the part was eliminated by the final remix. Martin also recorded an organ part for the song, which no longer survives even in remnant form.

Finally, McCartney double tracked his lead vocals. Utilizing frequency control (varispeed), the vocals were recorded at a slower than normal speed so that on playback, they were raised in pitch by just under one semitone. One of the most compelling aspects of the song is the repeat echo on the lead vocal (“Paperback writer...er...er...er...er...er...er...er” at 0:49 and 1:36 of the song). Along with the lead vocals, Lennon and Harrison added their backing vocals (double tracked along with the lead vocals and triple-tracked during the “rounds” at the introduction and between verses). What are they singing? The French lullaby, *Frère Jacques* (appropriately, “Brother John”). With these additions, recording on the song was completed.

The work on the song for the session ended with remix mono (RM) 1 and 2 created from take 2. RM 2 served as the mono release version of the song.

On October 31<sup>st</sup> in a Studio 1 control room session, remix stereo (RS) 1 through 3 were created from take 2. RS 3 served as the stereo release version of the song.

April 13 thru  
October 31, 1966

# Paperback Writer

TRACK 1

Guitar 1  
Guitar 2  
Drums  
Tambourine

TRACK 2

Bass  
Backing vocal 3

Bass  
Backing vocal 3

TRACK 3

Vocal 1  
Backing vocal 1

Vocal 1  
Backing vocal 1

TRACK 4

Vocal 2  
Backing vocal 2

Vocal 2  
Backing vocal 2

bt  
Take 2

Superimposition  
onto Take 2

rm  
REMIX

# Rain

## Sessions

- April 14, 1966
- April 16, 1966
- December 2, 1969

There was certainly something in the air on April 14<sup>th</sup>, 1966 at EMI Recording Studios, Studio 3, during the early sessions for *Revolver*. Perhaps you could point to the heady atmosphere of creative freedom, or maybe the drugs, or more than likely a little of both. The Beatles, even when they were simply rocking, innovated at every turn.

The innovations within John Lennon and Paul McCartney's *Rain* were less evident than those of songs like *Tomorrow Never Knows*, but nonetheless, The Beatles and their technical team built a vocabulary of modern recording techniques that would aid in their work for the rest of their careers, the most notable of these being the sophisticated use of frequency control — varispeed — altering the speed at which the tape recorded or played back at in order to affect the pitch and tempo of a song.

The technical team for the song's first session included producer George Martin, balance engineer Geoff Emerick, and tape operator Phil McDonald.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track featured Lennon on either his 1963 Gretsch PX6120 Nashville electric guitar with Gretsch Bigsby vibrato or 1961 Fender Stratocaster electric guitar with synchronized tremolo, Harrison on his 1964 Gibson SG Standard electric guitar with Gibson Maestro Vibrola vibrato, and Starr on his 1964 Ludwig Oyster Black Pearl “Super Classic” drum set.

For amplification, Lennon and Harrison used either the 120-watt 1966 JMI Vox 7120 amplifiers with a cabinet or the 85-watt 1966 Fender Showman (Blackface) amplifiers with cabinet.

Within five takes, the band perfected the backing track, take 5 being the best.

On April 16<sup>th</sup> in Studio 3, an entire session was dedicated to the completion of the song. Superimpositions onto take 5 included McCartney on his 1964 Rickenbacker 4001S bass (played through either the 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet or the 120-watt

1966 Vox 4120 bass amplifier with cabinet), followed by Lennon on double tracked lead vocals (recorded with frequency control (varispeed) at a slower than normal speed).

Three tape reduction remixes followed from take 5 (takes 6 through 8, utilizing ADT [artificial double tracking] on Lennon's lead vocal), take 7 being the best. The remixes also utilized frequency control (varispeed). While the playback speed of the backing track was nearly two semitones lower than the original, Lennon's vocal was at a normal pitch. On playback, the slower attack and longer decay of the instruments gave a "heavier" sound to the track.

The tape reduction opened up one track for additional backing vocals by Lennon, McCartney, and Harrison with Starr on tambourine.

Lastly, Lennon's backwards vocal at the end of the song was tagged to the lead vocal track. It was created by transferring and editing parts of his vocal from take 5 (track 3) onto a mono tape, reversing the tape and then recording it as a superimposition onto track 3 of take 7. The vocal lines chosen were: "Sip their lemonade...", "When the sun shines...", "When the sun shines...", "Rain, rain...", and "If the rain comes, they run and hide their heads..." These superimpositions onto take 7 completed recording on the song.

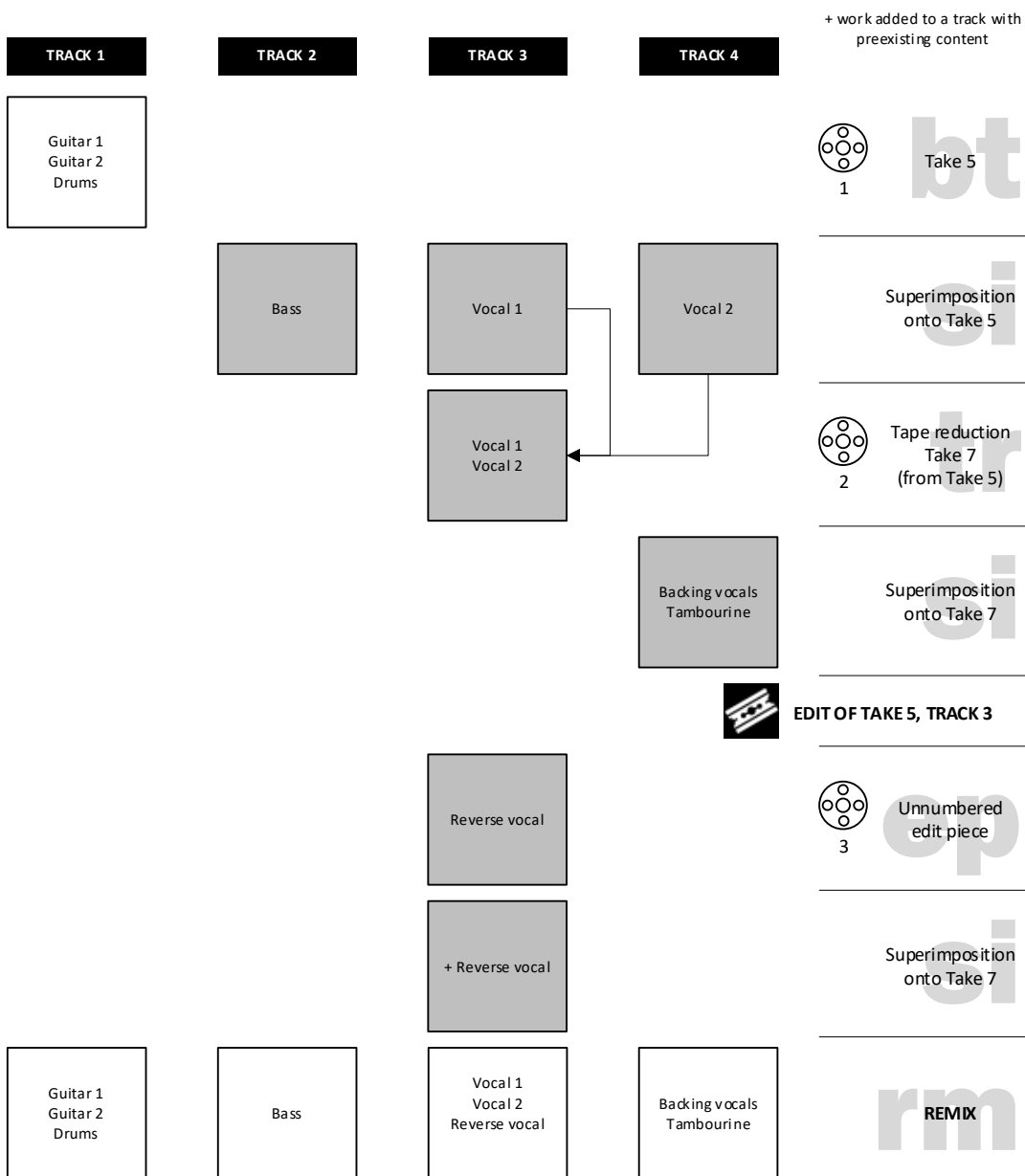
Before the session ended, remix mono (RM) 1 through 4 were created from take 7. Of these, RM 3 was considered best and served as the mono release version of the song.

No stereo version of the song was released in the UK during The Beatles' recording career. Over three and a half years later, the song was remixed for stereo.

On December 2<sup>nd</sup>, 1969 in a Studio 2 control room session, remix stereo (RS) 1 from take 7 was created in preparation for the Capitol Records US compilation album, *Hey Jude*.

April 14 thru 16, 1966

# Rain



# And Your Bird Can Sing

## Sessions

- April 20, 1966
- April 26, 1966
- April 27, 1966
- May 12, 1966
- May 20, 1966
- June 3, 1966

The music industry is competitive. The Beatles were by far the biggest band in the world in 1966, and the industry noticed. The Beach Boys and The Byrds on the west coast of the US were upping the ante on musicianship (with help from a group of master studio professionals later known as The Wrecking Crew), and The Beatles loved a good fight. John Lennon and Paul McCartney's *And Your Bird Can Sing* demonstrated that the band could more than hold their own when it came to musicianship, chops — whatever you want to call it. The song featured intricate harmonies on both guitars and vocals that were truly exceptional.

The technical team for the song's first session on April 20<sup>th</sup>, 1966 at EMI Recording Studios, Studio 2, included producer George Martin, balance engineer Geoff Emerick, and tape operator Phil McDonald.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track featured Lennon on his 1961 Fender Stratocaster electric guitar with synchronized tremolo, Harrison on his 1965 Rickenbacker 360-12 (12-string) electric guitar and Starr on his 1964 Ludwig Oyster Black Pearl “Super Classic” drum set. (In a 1987 interview in *Guitar Player Magazine*, Harrison was unsure whether McCartney or Lennon could be credited with the guitar work alongside his own on the track, though at least in these first attempts at the song, Lennon's aggressive count-in indicate him as the guitarist.)

For amplification, Harrison (and Lennon, if he played on the track) used either the 120-watt 1966 JMI Vox 7120 amplifiers with cabinet or the 85-watt 1966 Fender Showman amplifier with cabinet. McCartney (if he was the second guitarist) used his 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet.

In two takes the basic backing track was laid, take 2 being the best.

Superimpositions onto take 2 followed with Lennon and McCartney's lead vocal (occasionally featuring Harrison), McCartney on his 1964 Rickenbacker 4001S bass (also played through his 1963 Fender Bassman 6G6-A rig), Harrison adding a guitar solo and doubling the primary guitar figure on one of three electric guitars he had to work with (a 1961 Fender Stratocaster with synchronized tremolo, 1964 Gibson SG Standard with Gibson Maestro Vibrola vibrato, or a 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato), Starr on tambourine, Lennon double tracking his vocals at the middle-eights and Lennon and McCartney also attempting to double their primary vocal (at least one of the takes was riddled with drug-induced fits of laughter).

While work on the song was extensive, the results sounded more like a highly finished demo than a version on its way to release. And a demo it turned out to be, as the next session saw the band remake the song with a new backing track and much stronger results.

The remake occurred six days later on April 26<sup>th</sup> in Studio 2. Eleven takes of a new backing track started the work (takes 3 through 13). Of the 11 takes, take 10 was considered the best overall, while take 6 had the best ending.

Take 10 featured Lennon on either his Fender Stratocaster or his 1965 Epiphone ES-230TD, Casino electric guitar, Harrison again on one of three electric guitars available to him ( the 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue), 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato or 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato), McCartney on his 1962 Epiphone ES-230TD, Casino electric guitar with Selmer Bigsby B7 vibrato (played through the Fender Bassman 6G6-A amplifier), and Starr behind his Ludwig drums. (Take 6 had a different track layout, with Lennon on guitar and vocals, McCartney on bass and vocals, Harrison on guitar and Starr on drums.)

Lennon stabbed the song's chords, leaving the intricate, harmony scale-work of the song's signature phrase to Harrison and McCartney.

The first superimpositions were applied to both takes 6 and 10: Starr on tambourine and more hi-hat and cymbals and McCartney on his Rickenbacker 4001S bass.

At some point soon after it was determined that while take 10 represented the best overall performance, McCartney's bass ending for the song on take 6 was superior.

As the earlier backing track, take 6, didn't include the intricate, harmony scale-work of take 10, those parts by Harrison and McCartney were also superimposed. Remixes of the song incorporated an edit of takes 10 and take 6.

Finally, Lennon added his lead vocals with McCartney and Harrison on backing vocals and handclaps (all recorded with frequency control (varispeed) to take 10 at a slower than normal tape speed, on playback sounding around half a semitone higher in pitch). These additions completed recording on the track.

On April 27<sup>th</sup> in a Studio 3 control room session, remix mono (RM) 6 was created from take 10 (it is not known whether RM 1-5 were ever created, though there appears to be a reel missing in the EMI tape logs between reels E59745 and E59747 that may have contained the missing remixes). The remixes featured ADT (artificial double tracking) on Lennon's lead vocals and McCartney's primary harmony vocal. This treatment was consistent for all remixes of the song.




On May 12<sup>th</sup> in a Studio 3 control room session, RM 7 and 8 were created from takes 6 and 10. Then an edit was made, mating the end of take 6 to the primary take 10.

On May 20<sup>th</sup> in a Studio 1 control room session, remix stereo (RS) 1 and 2 were created from takes 6 and 10, with the same edit as on the mono version of the song. The edited result served as the stereo release version of the song.

On June 3<sup>rd</sup> in a Studio 3 control room session, RM 9 and 10 were created from takes 6 and 10, and edited the same as previous versions. The edited result served as the mono release version of the song.

April 20 thru  
June 3, 1966

# And Your Bird Can Sing

TRACK 1	TRACK 2	TRACK 3	TRACK 4	
Guitar 1 Bass Drums 1	Guitar 2**		Vocal 1** Vocal 2**	<div>  <div>Take 6</div> </div>
Guitar 1 Drums 1	Guitar 2 Guitar 3			<div>  <div>Take 10</div> </div>
	Guitar 2 Guitar 3		Bass Tambourine Cymbal and Hi-hat	Superimposition onto Take 6
		Vocal Backing vocals Handclaps	Bass Tambourine Cymbal and Hi-hat	Superimposition onto Take 10
Guitar 1 Bass Drums 1	Guitar 2 Guitar 3		Bass Tambourine Cymbal and Hi-hat	REMIX (RM 6 and RS 1) from Take 6
Guitar 1 Drums 1	Guitar 3 Guitar 4	Vocal Backing vocals Handclaps	Bass Tambourine Cymbal and Hi-hat	REMIX (RM 7 and RS 2) from Take 10
Guitar 1 Drums 1	Guitar 3 Guitar 4	Vocal Backing vocals Handclaps	Bass Tambourine Cymbal and Hi-hat	<div>  <div>EDIT OF RM 6 AND RM 7 EDIT OF RS 1 AND RS 2</div> </div>
Guitar 1 Drums 1	Guitar 3 Guitar 4	Vocal Backing vocals Handclaps	Bass Tambourine Cymbal and Hi-hat	RELEASE VERSION

# Taxman

## Sessions

- April 21, 1966
- April 22, 1966
- April 27, 1966
- May 16, 1966
- June 21, 1966

When it came to putting an album together, George Martin's early philosophy was to start the release with the strongest song and end with an unforgettable one. *Please Please Me* demonstrates this with the lead track, *I Saw Her Standing There* and the final track, *Twist And Shout*, and the approach held for every other album to date.

What was it about George Harrison's *Taxman* that fit the bill for *Revolver's* opening track? The hard-rocking nature of the melody? The undeniable punch of Starr's drums under Emerick's influence? The bitter, Indian-influenced solo? Whatever drew Martin to choose the song, he rightly identified one of Harrison's signature contributions to The Beatles' catalogue and one in which he comes into his own as a songwriter competing with the likes of Lennon and McCartney.

The technical team for the song's first session on April 21st, 1966 at EMI Recording Studios, Studio 2, included producer George Martin, balance engineer Geoff Emerick, and tape operator Phil McDonald. (A rehearsal session had occurred the previous day, with four takes recorded.)

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track featured Harrison on one of three electric guitars he had in circulation at the time (a 1961 Fender Stratocaster with synchronized tremolo, a 1964 Gibson SG Standard with Gibson Maestro Vibrola vibrato, or a 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato), McCartney on his 1964 Rickenbacker 4001S bass, and Starr on his 1964 Ludwig Oyster Black Pearl "Super Classic" drum set.

For amplification, Harrison used either the 120-watt 1966 JMI Vox 7120 amplifier with cabinet or the 85-watt 1966 Fender Showman (Blackface) amplifier with cabinet. For bass amplification, McCartney used his 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet.

Eleven takes were required to perfect the backing track, with only four complete performances, and take 11 being the best of these. (Despite the take numbering, there was no take 5 recorded.) The song ran at 2:32 at this point as the original backing track did not include plans for a second solo.

Three sets of superimpositions onto take 11 followed, the first two featuring Harrison's double tracked lead vocals, and Lennon and McCartney on double tracked backing vocals.

In the third set, superimpositions included Harrison on additional guitar for the verses beginning with “Don’t ask me what I want it for...” and “Should five percent appear to small...”, Lennon and McCartney singing “Anybody got a bit of money?” and Starr on tambourine.

McCartney's searing guitar solo (played on his 1962 Epiphone ES-230TD, Casino electric guitar with Selmer Bigsby B7 vibrato through the Fender Bassman 6G6-A amplifier), landed on the same track. These additions completed tracking on the song for the day.

The following day, a single tape reduction remix was created from take 11, named take 12. At some point either during, or after the reduction, the “Anybody got a bit of money?” backing vocals and the later of Harrison’s two new guitar contributions were not carried forward to the next step in the recording.

Superimpositions onto take 12 followed with Starr on cowbell, and Lennon and McCartney’s new backing vocals. The backing vocals from the previous day were replaced by the “Ah, ah, Mr. Wilson...” version heard in the release of the song.

On April 27th in a Studio 3 control room session, remix mono (RM) 1 was created from take 12. This first remix lacked something, and work continued on the song in the following month.

On May 16th the band returned to Studio 2 for a final superimpositions to take 12. In it, McCartney added the cryptic “One, two, three, four...” count-in that starts the song. Harrison also added a single word (“me”) to his lead vocal, in order to mask an upcoming edit that would repeat McCartney’s guitar solo as the fade out to the song. This addition completed recording on the song.

Before the session ended, RM 2 through 5 were created from take 12 (still running the original 2:32). Of these remixes, RM 4 was considered best and a tape copy was made of it.

On June 21st in a Studio 3 control room session, RM 5 and 6 were created from take 12 (no one keeping particularly close track of the remix numbers, as another RM 5 existed from the May 16th sessions). These remixes were edited together as previously planned, repeating McCartney's guitar solo at the end of the song, extending it to its final 2:37 running time.

In the same session, remix stereo (RS) 1 and 2 were created from take 12 and subjected to the same editing. These edited versions served as the mono and stereo release versions of the song.

April 21 thru  
June 21, 1966

# Taxman

\*\*work not used or erased  
+ work added to a track with  
preexisting content

## TRACK 1

Guitar 1  
Bass  
Drums

## TRACK 2

Guitar 2  
Guitar 3  
Tambourine  
Backing Vocal 3\*\*



Guitar 2  
Guitar 3  
Tambourine

## TRACK 3

Vocal 1  
Backing vocal 1

Vocal 1  
Backing vocal 1  
Vocal 2  
Backing vocal 2

## TRACK 4

Vocal 2  
Backing vocal 2

Cowbell  
Backing vocal 4

+Vocal 3  
+ Backing vocal 5

Cowbell  
Vocal 3  
Backing vocal 4  
Backing vocal 5



Take 11

Superimposition  
onto Take 11




Tape reduction  
Take 12  
(from take 11)

Superimposition  
onto Take 12

Superimposition  
onto Take 12

**REMIX**  
(RM 5 AND 6)

 **EDIT OF RM 5 AND RM 6**  
(solo at coda)

# I'm Only Sleeping

## Sessions

- April 27, 1966
- April 29, 1966
- May 5, 1966
- May 6, 1966
- May 12, 1966
- May 20, 1966
- June 6, 1966

George Martin commented that once The Beatles discovered something new in the studio, they wanted to apply it to everything. Backwards audio? Let's record everything backwards! Artificial double tracking (ADT)? Double track it! Vocals through a Leslie speaker? Put everything through a Leslie speaker! And on and on. While in the wrong hands these innovations could quickly become nothing more than gimmicks, The Beatles had their producer to keep them in check and to make sure that their use of these innovations was always musical.

John Lennon and Paul McCartney's *I'm Only Sleeping* used two studio innovations, frequency control and backwards audio, tastefully and applied to great effect, enhancing the dreamlike atmosphere of Lennon's lyrics and vocal delivery.

The technical team for the song's first session on April 27<sup>th</sup>, 1966 at EMI Recording Studios, Studio 3, included producer George Martin, balance engineer Geoff Emerick, and tape operator Phil McDonald.

The song was recorded to the four-track Studer J-37 primary tracking machine.

Early takes of the backing track featured Lennon on his 1964 Gibson J-160E acoustic guitar and lead vocals, McCartney on backing vocals, Harrison on tambourine, and Starr on bongos, though prior to the final and best take of the backing track, things changed considerably, with the vocals omitted entirely.

The final backing track included Lennon on his acoustic guitar, McCartney on his 1964 Rickenbacker 4001S bass, and Starr on his 1964 Ludwig Oyster Black Pearl “Super Classic” drum set.

For bass amplification, McCartney used either his 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet or the 120-watt 1966 Vox 4120 bass amplifier with cabinet.

The track utilized frequency control like the approach taken with *Rain* though this time they recorded the backing track at a faster speed. On playback, it was an entire step lower in pitch and speed. By take 11 a solid backing track was completed and work on the song ended for the session. (There was no take 10.)

On April 29<sup>th</sup> in Studio 3, the band decided to try a remake of the song from scratch.

After a rehearsal take, five new takes were created, starting again with take 1.

This backing track featured Lennon on a nylon-string acoustic guitar (either the Jose Ramirez Guitarra de Estudio or Jose Ramirez A1 Segovia) and Starr on drums. Also on the backing track, either McCartney or Harrison each played either the studio's 1965 Lowrey DSO-I Heritage Organ or vibraphone (it is not known which Beatle played which instrument).

The song in this form went no further than take 5, as the band returned to take 11 of the earlier version for more work.

Superimpositions to take 11 continued with Lennon's lead vocals, recorded with frequency control at a slower than normal speed, giving the result a fragile quality when played back at normal speed, nearly two semitones higher in pitch. Backing vocals by Lennon, McCartney and Harrison were also added.

On May 5<sup>th</sup> in Studio 3, Harrison added lead guitar to the song. (While Lewisohn notes that Harrison played the guitar solos on *I'm Only Sleeping*, both Martin, in an *Anthology* interview, and Emerick in his own autobiography recall that both Harrison and McCartney played the solos for the track.)

The solo (with fuzz distortion added) was performed with a variation of the backwards audio effect, against a reversed backing track. To achieve this, the chord progression was written out in reverse for Harrison to follow. It took the entire session to get it right.

On May 6<sup>th</sup> in Studio 2, work began with a tape reduction remix of take 11 into takes 12 and 13. Of the remixes, take 13 was considered best. An additional superimposition of backwards solo guitar by Harrison followed.

The last thing recorded was a yawn heard on the song was provided by McCartney (a careful listen to the stereo remix of the song reveals Lennon directing, “Yawn, Paul.” at the 01:57 mark). This addition completed recording on the song.

Before the session ended, remix mono (RM) 1 through 4 were created from take 13. All the remixes of the song were made at an even lower playback speed, resulting in a somnambulistic tempo and pitch nearly a semitone lower than the master tape.

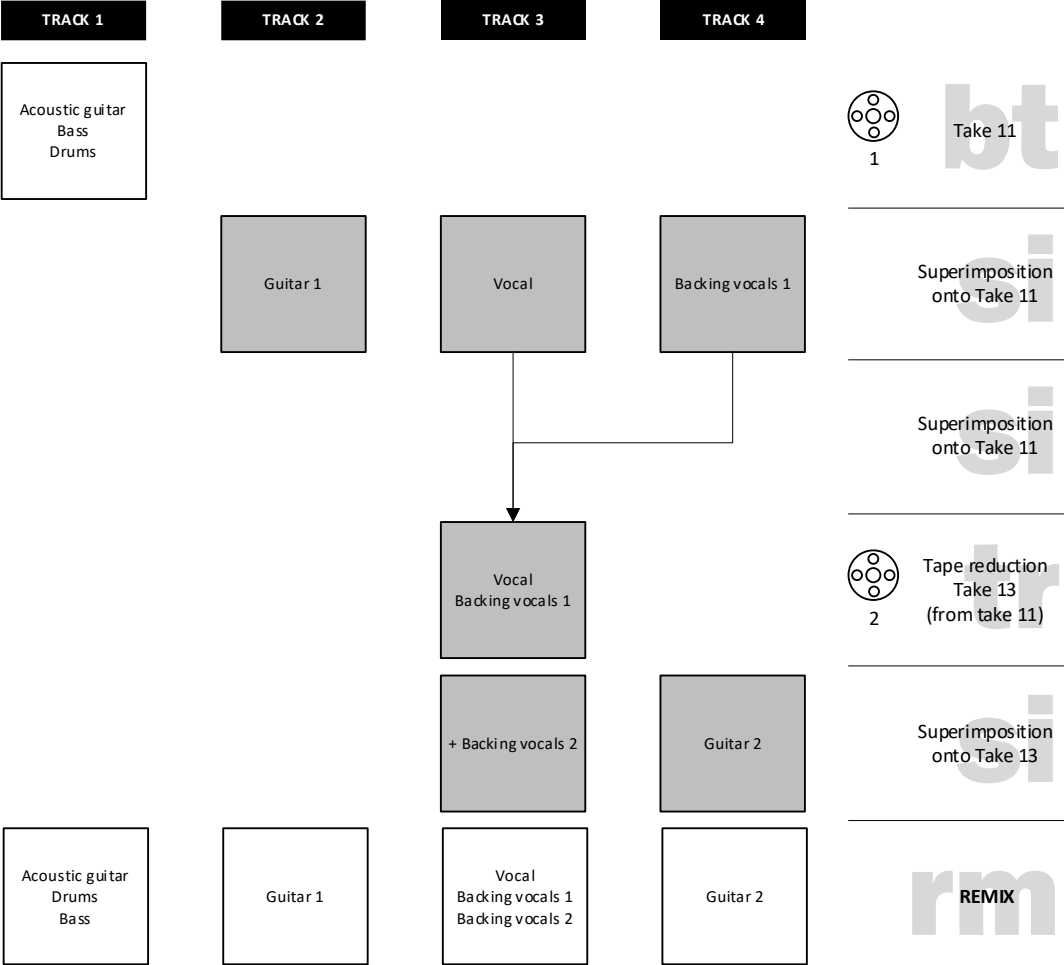
Six days later on May 12th in a Studio 3 control room session, RM 5 was created from take 13. This remix, made for the US market, ended up on the *Yesterday...and Today* album. This and all other remixes of the song used ADT (artificial double tracking) on the vocals.

On May 20<sup>th</sup> in a Studio 1 control room session, remix stereo (RS) 1 and 2 were created from take 13. RS 2 served as the stereo release version of the song.

Finally, on June 6<sup>th</sup> in a Studio 3 control room session, RM 5 and 6 were created from take 13 (RM 5 was misnumbered, as a remix with the same number had been made on May 12th). RM 6 served as the mono release version of the song.

April 27 thru  
June 6, 1966

# I'm Only Sleeping



# Eleanor Rigby

## Sessions

- April 28, 1966
- April 29, 1966
- June 6, 1966
- June 22, 1966

What did it take to qualify a song as a Beatles song? Did the band have to play on the track? *Yesterday* and *Love You To* argued no – only McCartney played on the former, and only Harrison played on the latter. Was it just a member of the band singing on the track? John Lennon and Paul McCartney's *Eleanor Rigby* made the case for this qualification. No Beatle played an instrument on the track. In another example of how the primary focus of Martin and the band had become what worked for the song, the new normal established during the *Revolver* sessions of what constituted a “Beatles song” simply meant that some member participated in some way on the track.

The technical team for the song's first session on April 28<sup>th</sup>, 1966 at EMI Recording Studios, Studio 2, included producer George Martin, balance engineer Geoff Emerick, and tape operator Phil McDonald.

The song was recorded to the four-track Studer J-37 primary tracking machine.

George Martin conducted the mixed octet for the backing track, which featured Tony Gilbert on first violin, Sidney Sax, John Sharpe and Jurgen Hess on additional violins, Stephen Shingles and John Underwood on violas and cellists Derek Simpson and Norman Jones.

Emerick continued to use his close mic'ing technique for the strings, placing the Neumann KM54 and KM56 condenser microphones as near as possible to each of the musicians' instruments, capturing every nuance of the bowing, and lending a percussive quality to the song's sound.

Fourteen takes of the backing track were required to perfect Martin's arrangement, take 14 being the best. (Only ten takes were complete.) Before the session ended, a tape reduction remix was created from take 14, with the string section reduced to a single track, now named take 15.

On April 29<sup>th</sup> in Studio 3, superimpositions onto take 15 included McCartney's lead vocal, and Lennon and Harrison's backing vocals. Additional work was recorded, but left unused,, including

another lead vocal and simple percussion from Starr and another (unidentified) Beatle on the studio's ASBA congas and finger cymbals.

Before the session ended, remix mono (RM) 1 through 3 were created from take 15.

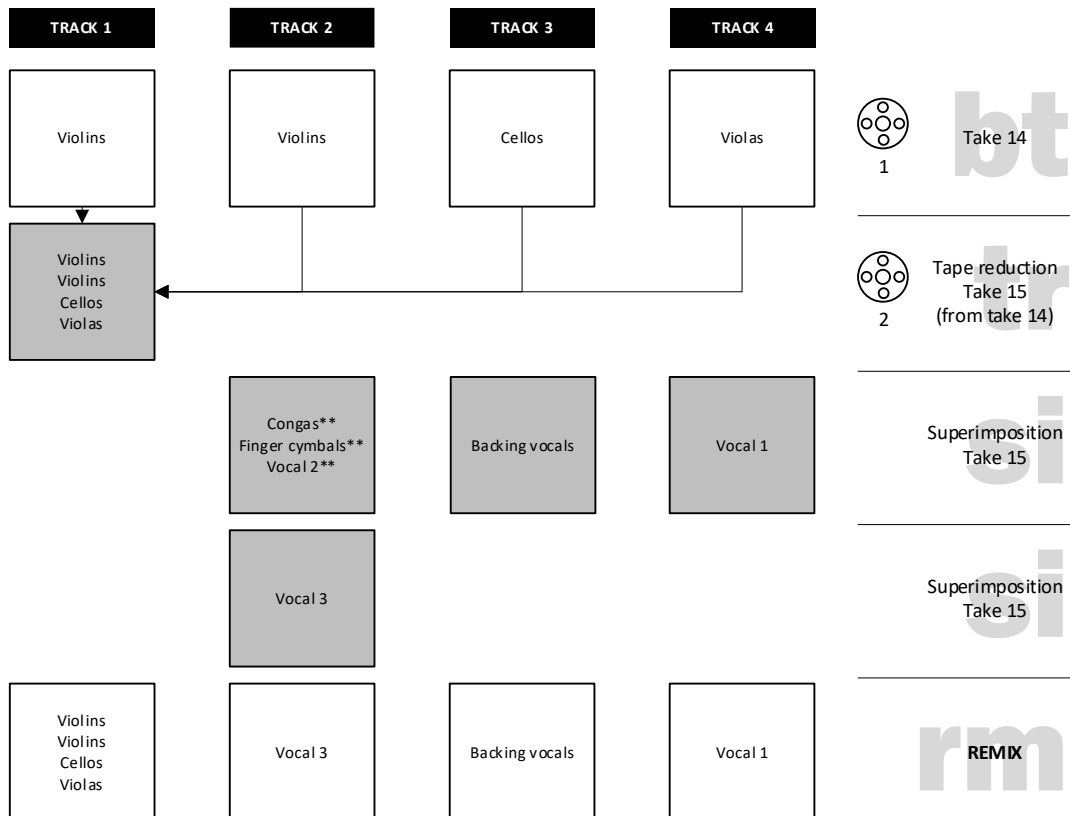
On June 6<sup>th</sup>, the band returned to Studio 3 where the vocal and percussion superimposition from April 29<sup>th</sup> was replaced by more lead vocal from McCartney, doubling the choruses of the song. This addition completed recording on the song.

On June 22<sup>nd</sup> in a Studio 3 control room session, RM 4 and 5 and remix stereo (RS) 1 were created from take 15. The remixes all featured the addition of ADT (artificial double tracking) on McCartney's vocals. RM 5 and RS 1 served as the mono and stereo release versions of the song.

April 28 thru  
June 22, 1966

# Eleanor Rigby

\*\*work not used or erased



# For No One

## Sessions

- May 9, 1966
- May 16, 1966
- May 19, 1966
- June 6, 1966
- June 21, 1966

As with many songwriters, when inspiration strikes, curiosity demands that you follow that inspiration to see where it goes. Paul McCartney was no different in this characteristic, and as *Eleanor Rigby* had set a classical tone, his (and John Lennon's) follow up composition, *For No One*, explored the vernacular further. As usual, what could have easily turned into a stylistic mockery of classical music was handled by Martin with grace, restraint, and respect. The sparse instrumentation and simple arrangement were certainly its strength.

The technical team for the song's first session on May 9<sup>th</sup>, 1966 at EMI Recording Studios, Studio 2, included producer George Martin, balance engineer Geoff Emerick, and tape operator Phil McDonald.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track couldn't have been simpler, featuring McCartney on the studio's Steinway "Music Room" Model B Grand Piano and Starr on his 1964 Ludwig Oyster Black Pearl "Super Classic" drum set.

Ten takes completed the backing track, with take 10 considered best. Work moved onto superimpositions, which consisted of McCartney's clavichord and Starr on additional cymbal and maracas.

On May 16<sup>th</sup> in Studio 3, work continued on the track. First, McCartney added his lead vocal to take 10, which utilized frequency control (varispeed). Recorded at a slower than normal speed, on playback the pitch of his vocal rose by nearly a semitone.

Next, a tape reduction remix was created from take 10, opening two tracks for further work. It also utilized frequency control, recorded at a slower than normal tape speed, slowing the tempo and lowering the pitch of the entire track by nearly a semitone.

Between the applications of varispeed on the lead vocal and tape reduction remix, McCartney's lead vocal ended up back at its original performance tempo and pitch. Two attempts were made of the remix, numbered takes 13 and 14 (there were no takes 11 and 12); take 14 was the best of these.

Onto take 14, McCartney added his 1964 Rickenbacker 4001S bass (played through either his 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet or the 120-watt 1966 Vox 4120 bass amplifier with cabinet) and Starr added tambourine.

On May 19<sup>th</sup> in Studio 3, the final superimposition was performed. Martin brought in London Symphony Orchestra French horn player Alan Civil to perform the song's solo. Again, Emerick took a close mic'ing approach to the part, using the STC 4038 microphone for the job. This addition completed recording on the track.

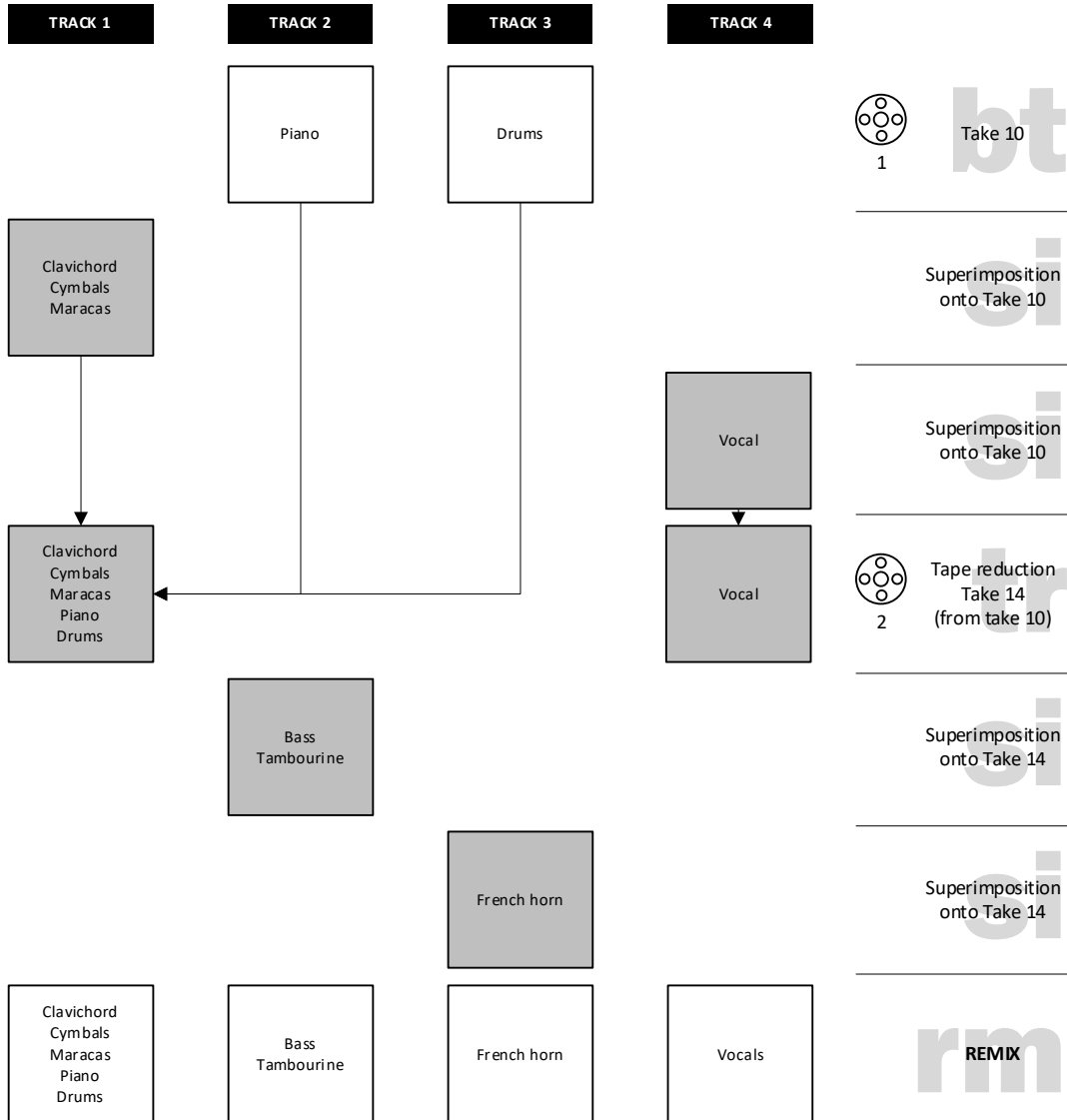
On June 6<sup>th</sup> in a Studio 3 control room session, remix mono (RM) 1 through 6 were created from take 14. McCartney's vocal was treated with some minor echo chamber sweetening, but otherwise the song went unaffected (this approach was also used on later remixes of the song).

On June 21<sup>st</sup> in another Studio 3 control room session, RM 7 and 8 were created from take 14. RM 8 served as the mono release version of the song.

The same session saw remix stereo (RS) 1 created from take 14, which served as the stereo release version of the song.

May 9 thru  
June 21, 1966

# For No One



# Yellow Submarine

## Sessions

- May 26, 1966
- June 1, 1966
- June 2, 1966
- June 3, 1966
- June 22, 1966

Ringo Starr needed a song for *Revolver* and Paul McCartney had one brewing that fit him perfectly. With John Lennon's absurdist additions, *Yellow Submarine* further established Starr's lovable simpleton persona with the public, though he was anything but a simpleton in real life. The track led the band into new sonic territory and pushed the technical team to support their storytelling ambitions.

Work on the song began on May 26<sup>th</sup>, 1966 at EMI Recording Studios, Studio 3. With George Martin absent for the first session, Geoff Emerick had the added responsibility as both the de facto producer and balance engineer, while Phil McDonald served as the tape operator.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track featured Lennon on his 1964 Gibson J-160E acoustic guitar, McCartney on his 1964 Rickenbacker 4001S bass, Harrison on tambourine, and Starr on his 1964 Ludwig Oyster Black Pearl “Super Classic” drum set.

For bass amplification, McCartney used either his 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet or the 120-watt 1966 Vox 4120 bass amplifier with cabinet.

The band recorded a series of rough takes of the song (Barrett's notes can be interpreted as eight of them), then got down to business, with three complete takes and one false start. Of the four total takes, take 4 was considered best.

Two superimpositions onto take 4 followed, one with Starr on lead vocals and Lennon, McCartney, and Harrison on backing vocals (one pass recorded with frequency control (varispeed) at a slower than normal tape speed, then played back at nearly a semitone higher in pitch). Another was used to double track the vocals and also featured Starr on maracas.

In an interview for *Musician* magazine in July 1987, George Martin stated that Lennon's vocal of the submarine crew (“...a life of ease!”) was recorded live with the lead vocal, with his voice routed via “one of those little hand mikes” (likely referring to an AKG D19c) through a Vox amplifier.

Before the session ended a tape reduction remix was made from take 4 (take 5), reducing the four tracks to two.

On June 1<sup>st</sup> the band returned to the song in Studio 2 for its final superimpositions. Lennon, McCartney, Harrison and Starr added backing vocals to the track. Next, an EMI sound effects tape (Volume 46) containing the song ‘Le Rêve Passe’ (The Dream Passes), a French patriotic song from the Napoleonic era, was edited and slowed down so its pitch and timing matched the key of ‘Yellow Submarine’ for the allotted solo section after the words, “And the band begins to play...”

And there was more. How do you bring a yellow submarine to life? Bring in a crew! The final superimpositions to take 5 were a group effort – a large group effort.

The session on the 1<sup>st</sup> was packed full of guests and The Beatles put them to work. (Session guests were surprisingly common, though in most cases they sat by in the background and observed the work in progress). Roadie Mal Evans played a marching band bass drum, shovelled sand, and contributed to the group backing vocals that also included road manager and long-time friend Neil Aspinall, Harrison's wife, Pattie Harrison, pop star Marianne Faithfull, the band's chauffeur, Alf Bicknell (who also rattled some chains). Others included Rolling Stones guitarist Brian Jones (clinking glasses and playing a swanee (slide) whistle) and EMI Studios' John Skinner and Terry Condon (who swirled chains around a metal tub filled with water). Finally, even Martin and Emerick got in on the singing.

In addition to the group vocals, the sound effects (recorded onto two channels) included ringing ship's bells, the whooshing sound of ocean waves, Lennon's nonsense gibberish (distinct from his call and response vocals which appear later in the song, recorded before), the sound of a puttering engine, muttering voices with the clinking of party glasses, a sound like keys being shook, bubbling water, and the short sound of a tick-tock clock in time with the beat. Along with The Beatles, Skinner and Condon also assisted on the sound effects.

One of the more interesting outtakes created in the session was Starr's unused introduction. In it, he recites a short verse over the sound of marching feet (joined by the other Beatles on the second to last stanza). The marching-sound effect was created using a cardboard box with coals inside shifted from side to side.

While the entire unused introduction remains unheard, a version released with the *Real Love* CD single in 1996 fades in to include, “...yellow submarine. And we will march to free the day, to see them gathered there, from Land O' Groats to John O' Green; from Stepney to Utrecht, to see a Yellow Submarine We love it.” Marching for 700 miles (the actual distance between Land O' Groats and John O' Green)? It's a good thing they love it!

With these additions, recording on the song was completed.

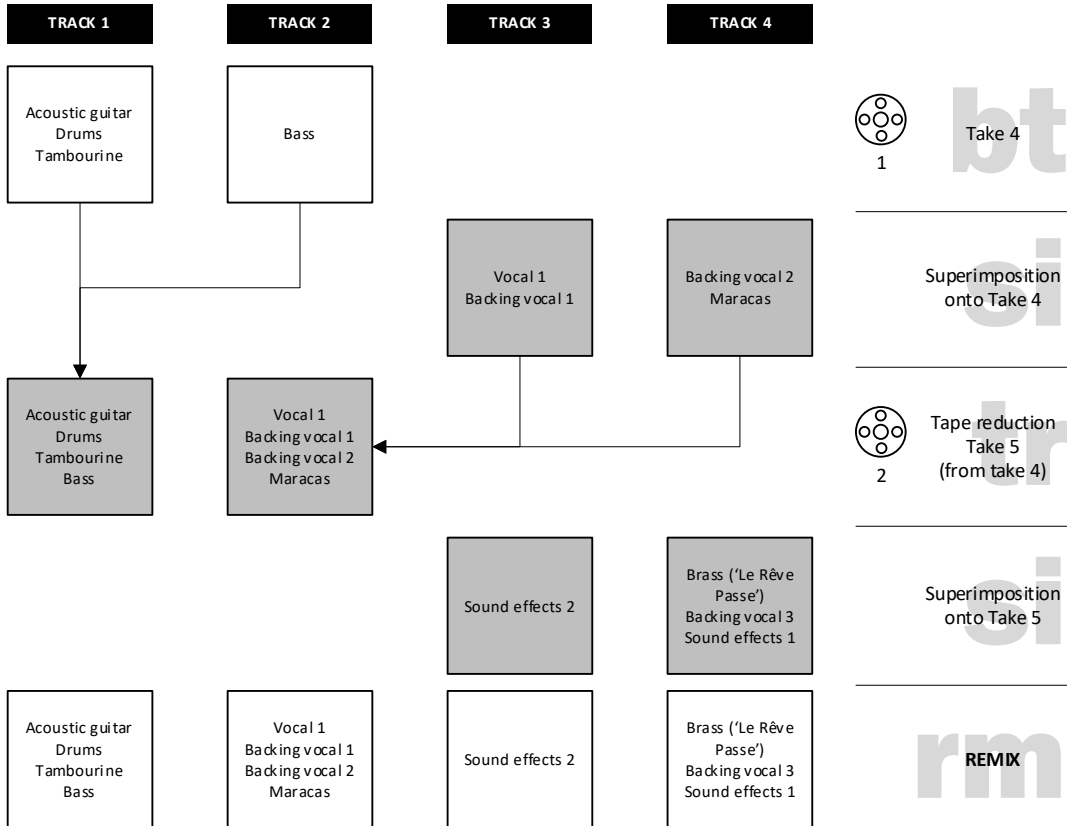
On June 2<sup>nd</sup> in Studio 2, remix mono (RM) 1 was created from take 5. The version was a rough remix of the previous day's work.

On the following day in Studio 2, RM 1 through 5 were created, also from take 5 (the earlier RM 1 was ignored). Aside from some echo chamber on the vocals, no other effects were added to the track at remix. RM 5 served as the mono release version of the song.

On June 22<sup>nd</sup> in a Studio 3 control room session, remix stereo (RS) 1 and 2 were created from take 5. RS 2 served as the stereo release version of the song.

May 26 thru  
June 22, 1966

# Yellow Submarine



# I Want To Tell You

## Sessions

- June 2, 1966
- June 3, 1966
- June 6, 1966
- June 21, 1966

It was something of a running joke that George Harrison never had names for the songs he wanted to record with The Beatles. They came in untitled, and the engineers would try to come up with something to slate the audio with. Just as *Love You To* started life as *Granny Smith*, his new song for *Revolver* started life named after another apple – this one called *Laxton's Superb*. When that didn't stick, they called it, *I Don't Know* (for obvious reasons), before finally settling on *I Want To Tell You*.

The technical team for the song's first session on June 2<sup>nd</sup>, 1966 at EMI Recording Studios, Studio 2, included producer George Martin, balance engineer Geoff Emerick, and tape operator Phil McDonald.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track featured Harrison on one of three available electric guitars (his 1961 Fender Stratocaster with synchronized tremolo, a 1964 Gibson SG Standard with Gibson Maestro Vibrola vibrato, or a 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato), McCartney on the studio's Steinway “Music Room” Model B Grand Piano, Starr on his 1964 Ludwig Oyster Black Pearl “Super Classic” drum set and Lennon on tambourine and maracas.

For amplification, Harrison used either the 120-watt 1966 JMI Vox 7120 amplifier with cabinet or the 85-watt 1966 Fender Showman (Blackface) amplifier with cabinet.

Five takes were made of the backing track, with take 3 being the best. (Howlett noted more takes of the song (takes 12 through 17) appeared on another reel (E60045) originating May 26<sup>th</sup> that had been previously used on June 1<sup>st</sup> for the sound effects superimpositions on *Yellow Submarine*.)

Superimpositions onto take 3 followed, with Harrison's lead, and Lennon and McCartney's backing vocals double tracked to the two remaining open tracks.

A tape reduction remix followed, named take 4 (though that take number already existed), combining the instrumental performances on track 1 and the vocal performances on track 2.

The following day, final superimpositions onto take 4 featured McCartney's bass part, played on his 1964 Rickenbacker 4001S through either his 50-watt 1963 Fender Bassman 6G6-A amplifier or 120-watt 1966 Vox 4120 bass amplifier with cabinet and handclaps added to the end of the song by unknown Beatles. With these additions, recording on the song was completed.

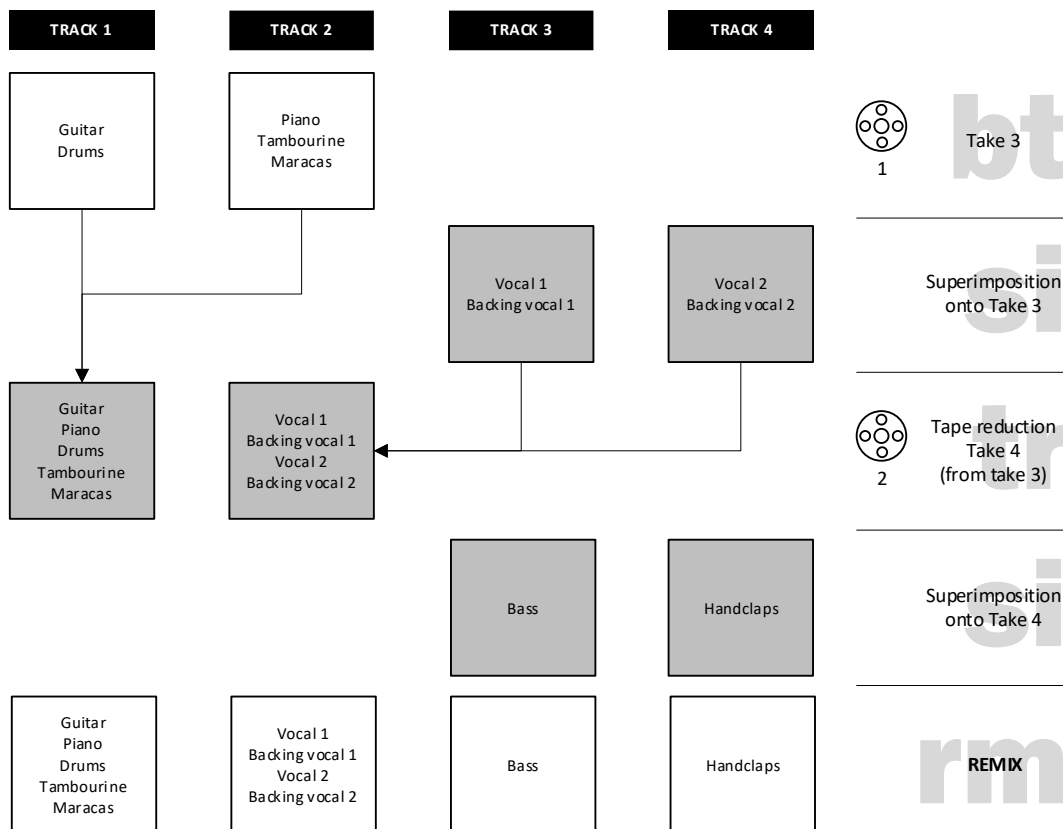
Work for the session ended with the creation of remix mono (RM) 1 through 4 from take 4. ADT (artificial double tracking) was applied to the vocal track and the handclaps for these and all other remixes. RM 1 served as the mono release version of the song.

On June 6<sup>th</sup> in a Studio 3 control room session, tape copies were created of RM 1, numbered RM 5 and 6.

Finally, on June 21<sup>st</sup> in another Studio 3 control room session, remix stereo (RS) 1 and 2 were created from take 4. RS 2 served as the stereo release version of the song.

June 2 thru 21, 1966

# I Want To Tell You



# Good Day Sunshine

## Sessions

- June 8, 1966
- June 9, 1966
- June 22, 1966

The Beatles didn't live in a cocoon. As part of the global music industry, they were very aware of what was hip and happening around them. In 1966, the folk-rock sound that preceded psychedelic culture (which bloomed and expired with the “Summer of Love” in 1967) was making waves in the US. One band from this scene in particular caught McCartney's ear – The Lovin' Spoonful. John Lennon and Paul McCartney's *Good Day Sunshine* (with the working title of *A Good Day's Sunshine* – perhaps harkening back to *A Hard Day's Night*?) was a take on that band's smash, *Daydream*, which hit the charts in February. As usual, while the influence may have germinated from elsewhere, the result was pure Beatles magic.

The technical team for the song's first session on June 8<sup>th</sup>, 1966 at EMI Recording Studios, Studio 2, included producer George Martin, balance engineer Geoff Emerick, and tape operator Richard Lush.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track featured McCartney on the studio's Steinway “Music Room” Model B Grand Piano, Starr on his 1964 Ludwig Oyster Black Pearl “Super Classic” drum set, Harrison on bass and Lennon on tambourine. (The bass in this instance was a 1964 Burns Nu-Sonic – McCartney's basses were left-handed and Lennon and Harrison were right-handed.)

For bass amplification, either the 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet or the 120-watt 1966 Vox 4120 bass amplifier with cabinet were available.

With take 1 the backing track was perfected, though a total of six takes were tracked.

Superimpositions onto take 1 followed, with McCartney adding lead vocals (recorded with frequency control (varispeed) at a slower than normal tape speed, then played back at around half a semitone higher in pitch), and Lennon and Harrison providing backing vocals.

In Studio 2 on the following day, more superimpositions onto take 1 completed the track. George Martin added the rollicking piano solo to complement McCartney's part (also utilizing varispeed), as well as a touch of piano after the lyric, "And then we lie beneath the shady tree..." Starr reinforced his drum part with fills at the song's choruses, and Lennon, McCartney, and Harrison provided additional backing vocals and handclaps. The overlapping "Good day sunshine" vocals heard at the end of the song were recorded across three tracks (tracks one, two and four).

Next, remix mono (RM) 1 through 6 were created from take 1. Some echo chamber was applied to Starr's secondary drum part, Martin's piano, and the song's vocal parts. This treatment was consistent over all remixes of the song. With RM 6 completed, work finished for the session.

On June 22<sup>nd</sup> in a Studio 3 control room session, a seventh mono remix was created from take 1. Though the seventh and best version of the remix, it was named RM 2 by the technicians. RM 2 served as the mono release version of the song.

The same session saw remix stereo (RS) 1 created from take 1. RS 1 served as the stereo release version of the song.

June 8 thru 22, 1966

# Good Day Sunshine

## TRACK 1

Piano 1  
Bass  
Drums 1  
Tambourine

## TRACK 2

## TRACK 3

## TRACK 4

bt  
Take 1

Superimposition  
onto Take 1

Superimposition  
onto Take 1

rm  
REMIX

+Backing vocal 4

Piano 3  
Handclaps  
Backing vocal 3

Piano 2  
Drum 2  
Backing vocal 2

Piano 1  
Bass  
Drums 1  
Backing vocal 4

Piano 3  
Handclaps  
Backing vocal 3

Vocal  
Backing vocal 1

Piano 2  
Drum 2  
Backing vocal 2

# Here, There And Everywhere

## Sessions

- June 14, 1966
- June 16, 1966
- June 17, 1966
- June 21, 1966

As recording wrapped up on *Revolver*, McCartney introduced a beautiful ballad to the album as further evidence of the maturing Beatles as songsmiths. The introduction utilized an approach that harkened back to songs like Harold Arlen's *Over The Rainbow*, opening with a movement and lyrics that are never repeated in the balance of the tune. John Lennon and Paul McCartney's *Here, There And Everywhere* served notice that the duo could master any form they chose to explore.

The technical team for the song's first session on June 14<sup>th</sup>, 1966 at EMI Recording Studios, Studio 2, included producer George Martin, balance engineer Geoff Emerick, and tape operator Phil McDonald.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track featured McCartney on his 1962 Epiphone ES-230TD, Casino electric guitar with Selmer Bigsby B7 vibrato and Starr on his 1964 Ludwig Oyster Black Pearl “Super Classic” drum set.

For amplification, McCartney most likely used his 50-watt 1963 Fender Bassman 6G6-A amplifier with cabinet (the 120-watt 1966 JMI Vox 7120 amplifier with cabinet as well as the 85-watt 1966 Fender Showman (Blackface) amplifier with cabinet were also available).

Four initial takes of the backing track were recorded; the first three breaking down, but with take 4, a complete and best version was in the can.

Superimpositions onto take 4 followed with McCartney, Lennon, and Harrison adding backing vocals and finger snaps. While the results of all this work had promise, they didn't hold up, and two days later the song was remade from scratch.

On June 16<sup>th</sup> the band returned to Studio 2 for the remake. Once again, the backing track comprised McCartney on electric guitar and guide vocal, Starr on drums, and this time joined by Harrison on electric guitar, playing the middle-eight figures and coda on his 1965 Rickenbacker 360-12 12-string electric guitar. (A volume pedal was used on the descending figure at the coda of the song.)

For amplification, Harrison used either the 120-watt 1966 JMI Vox 7120 amplifier with cabinet or the 85-watt 1966 Fender Showman (Blackface) amplifier with cabinet.

It took nine takes to get the new backing track just right (takes 5 through 13), with take 13 being the best.

Superimpositions onto take 13 included McCartney on his 1964 Rickenbacker 4001S bass (using his 1963 Fender Bassman 6G6-A amplifier with cabinet), and McCartney, Lennon, and Harrison on double tracked backing vocals and finger snaps.

With four tracks of the tape full, a tape reduction remix was created (with echo chamber added to the backing vocals in the process). Take 13 became take 14, opening up two tracks, the first containing the superimposition of McCartney's lead vocal. Frequency control (varispeed) was utilized on the part, which was recorded at a slower than normal speed to sound more fragile once played back, nearly a semitone higher in pitch.

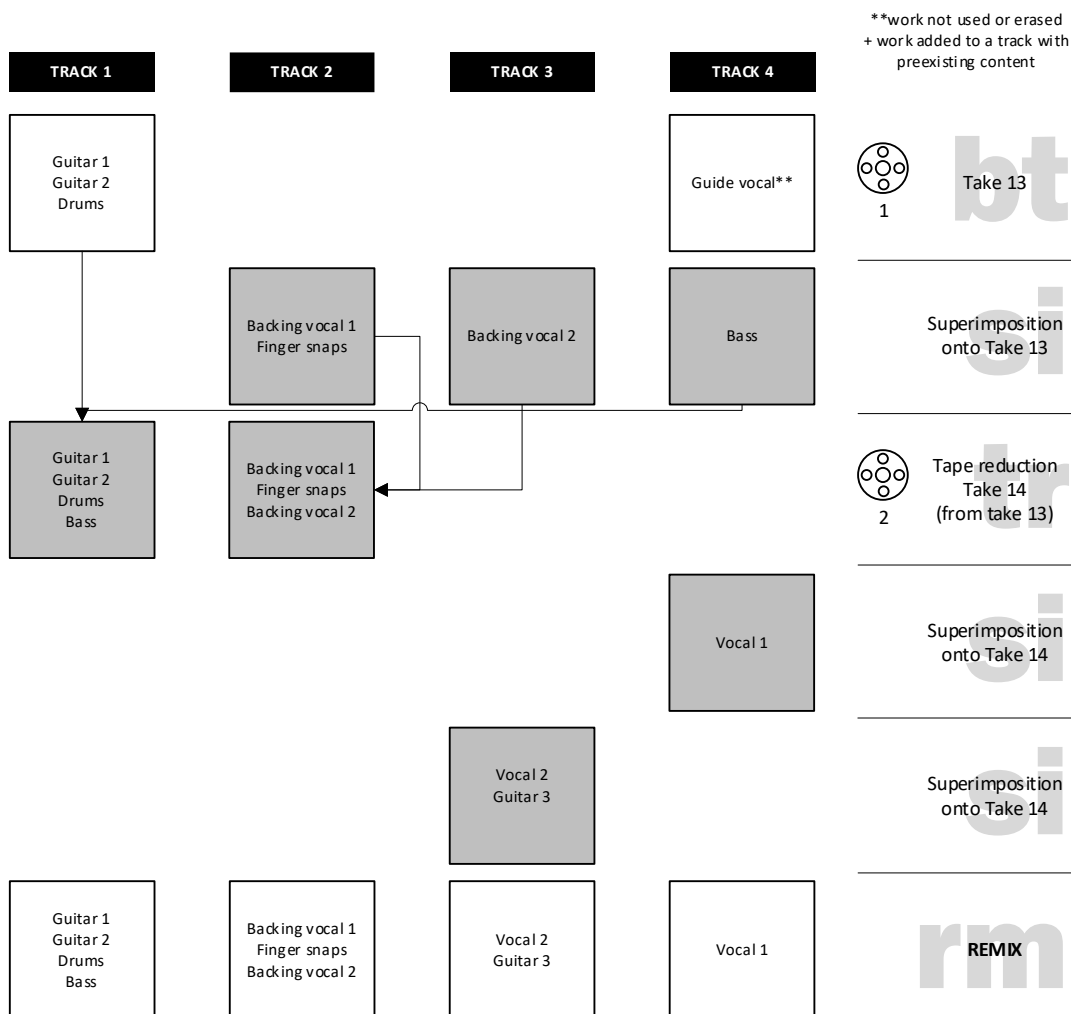
On the following day, the final superimpositions to take 14 included McCartney's double tracked lead vocals and Harrison double tracking his guitar part on the middle-eight. These additions completed recording on the track.

Before the session ended, remix mono (RM) 1 was created from take 14. The remix was improved upon in the next session for the song. ADT (artificial double tracking) was applied to the backing vocals during this and later remixes.

On June 21<sup>st</sup> in a Studio 3 control room session, RM 2 and 3 and remix stereo (RS) 1 and 2 were created from take 14. Of these remixes, RM 3 and RS 2 served as the mono and stereo release versions of the song.

June 14 thru 21, 1966

# Here, There And Everywhere



# She Said She Said

## Sessions

- June 21, 1966
- June 22, 1966

The final song recorded for the *Revolver* album famously had its genesis in Peter Fonda's acid-soaked brain. The story goes that as he wandered through a party at the Los Angeles home rented by the band during a break in their 1965 US tour, he kept telling The Beatles, "I know what it's like to be dead!" His experience came from having shot himself in the chest when he was 11 years old. While Lennon apparently wanted to punch Fonda to get him to shut up, something good came of it. John Lennon and Paul McCartney's *She Said She Said* was a compact recording, completed in a single session.

The technical team for the session on June 21<sup>st</sup>, 1966 at EMI Recording Studios, Studio 2, included producer George Martin, balance engineer Geoff Emerick, and tape operator Phil McDonald.

The song was recorded to the four-track Studer J-37 primary tracking machine.

The backing track featured Lennon on one of two electric guitars available to him (either his 1961 Fender Stratocaster with synchronized tremolo or 1965 Epiphone ES-230TD, Casino), McCartney on his 1964 Rickenbacker 4001S bass, Harrison on one of three electric guitars in use during this period (his 1961 Fender Stratocaster with synchronized tremolo, a 1964 Gibson SG Standard with Gibson Maestro Vibrola vibrato, or a 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato), and Starr on his 1964 Ludwig Oyster Black Pearl "Super Classic" drum set.

For amplification, Lennon used the 85-watt 1966 Fender Showman (Blackface) amplifier with cabinet. Harrison either used a matching amplifier, or the newly delivered 30-watt 1966 JMI Vox UL730 amplifier with cabinet.

For bass amplification, McCartney had a new amplifier to work with: A 30-watt 1966 JMI Vox UL430 Bass amplifier with cabinet.

After extensive rehearsal takes were attempted (Lewisohn notes 25 of them), within three official takes the backing track was perfected. It was recorded with frequency control (varispeed) at a faster

than normal tape speed so that on playback it sounded nearly a semitone lower in pitch and ran at a slower tempo.

Take 3 was best, and a good thing too, because afterwards, McCartney got in a fight with Lennon and left the studio. (Before the ruckus, six more takes of the backing track were attempted, noted as takes seven through nine and 15 through 17.)

Despite the row, superimpositions onto take 3 followed, with Lennon double tracking his lead vocals (this time using the varispeed effect to raise the pitch of his performance) and along with Harrison, adding backing vocals.

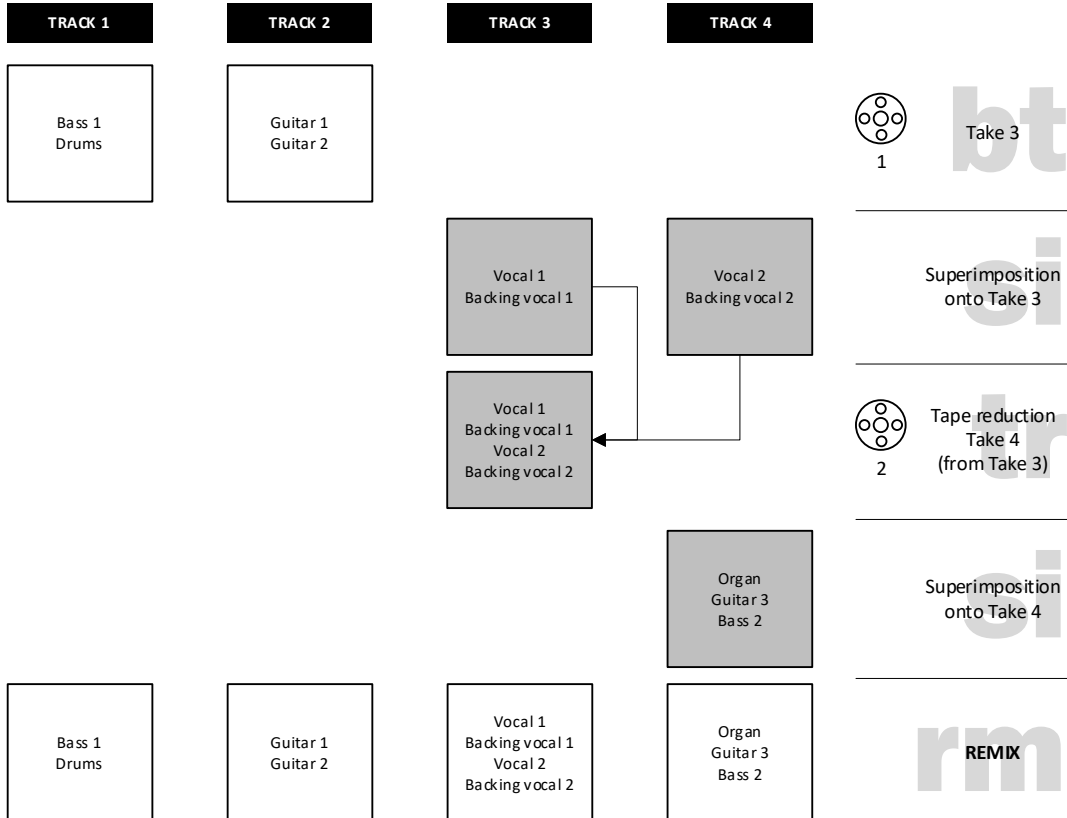
A tape reduction remix followed (take 4), opening up a single track where Lennon added a part on the 1965 Vox Continental 300 Organ (played through a 30-watt 1963 JMI Vox AC30/6 Twin Treble amplifier) and Harrison added more electric guitar and some bass played on the organ. These additions completed recording on the track. (Howlett noted a recording sheet in the Abbey Road archive indicated a piano was also added to the song, but no evidence of the performance exists.)

Before the session ended, remix mono (RM) 1 through 3 were created from take 4.

On June 22<sup>nd</sup> in a Studio 3 control room session, both RM 4 and remix stereo (RS) 1 were created from take 4. These remixes served as the mono and stereo release versions of the song.

June 21 thru 22, 1966

# She Said She Said



## April 6-7, 1966

### Time

8PM - 115AM

### Studio name and room

EMI Recording Studios  
Studio 3

### Songs recorded (composer) (activities)

- *Mark I (Tomorrow Never Knows)*  
(Lennon and McCartney)
  - takes 1-3
  - superimposition onto take 1

### Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

### Musicians (instruments played)

- John Lennon (guitar, vocals)
- Paul McCartney (bass)
- George Harrison (guitar)
- Ringo Starr (drums)

### Instruments

#### Electric guitars

##### *Lennon*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1965 Epiphone ES-230TD, Casino

##### *Harrison*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato
- 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato

#### Bass guitars

##### *McCartney*

- 1964 Rickenbacker 4001S

#### Drums

##### *Starr*

- 1964 Ludwig Oyster Black Pearl “Super Classic” (14” X 22” bass drum/ 9” X 13” rack tom/ 16” X 16” floor tom/ 1963 14” X 5.5” “Jazz Festival” snare); Paiste, Zyn, Zildjian cymbals (20” crash/ride; 20” Zyn 4-rivet “sizzle”) Zildjian cymbals (18” crash/ride; 14” model A hi-hats) (Ludwig Set 3)

#### Percussion

- Tambourine (Olympic or Ludwig)

#### Pianos and keyboards

- 1965 Lowrey DSO-I Heritage Organ

#### Other

- Leslie 122 speaker cabinet (See Notes)

## Amplifiers

### Guitar

#### *Harrison*

- 1966 JMI Vox 7120, 120W head with cabinet, 4X12" Vox Celestion Alnico Silver T1088 speakers and 2X Midax HF horns
- 1966 Fender Showman (Blackface), 85W head with cabinet, 1X15" JBL D130F speaker

### Bass

#### *McCartney*

- 1963 Fender Bassman 6G6-A (Blonde), 50W head with cabinet, with two 12" Jensen C12N or Oxford 12M6 speakers
- 1966 Vox 4120 bass, 120W head with cabinet, 2X15" Vox Celestion Alnico speakers and two Midax HF horns

## Recording equipment

#### *Recording console*

- REDD.51

#### *Primary tracking machine*

- FOUR-TRACK: 1" Studer J-37

#### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix

- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter
- Frequency Control Rack (Vortexion S.120 amplifier with Level TG 150M oscillator)

#### *Effects*

- Backward audio
- Echo chamber (includes RS61 Low Level Amplifier with RS62 Power Supply and RS106A Echo Control Unit – Band Pass Filter)
- Frequency control (varispeed)
- Leslie speaker
- STEED (send tape echo/echo delay)
- Tape loops

#### *Monitors*

#### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

#### Studio

- RLS10 - "White Elephant"
- Vox LS.40 speaker (with four 10" Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

### *Microphones*

#### Vocals

- Neumann U48 or U47/48 (U47/8)

#### Acoustic guitars

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

#### Electric guitar amplifiers

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

#### Bass amplifier

- AKG D20

#### Drums

- Overhead - AKG D19c
- Bass drum - AKG D20
- Under-snare - Neumann KM56
- Tom toms – STC 4038

#### Piano

- AKG D19c

#### Other

- Neumann U48 or U47/48 (U47/8)
- STC 4038

### **Backing tracks**

- *Mark I (Tomorrow Never Knows)* – take 1 backing track included Lennon on guitar; Harrison on guitar; Starr on drums

Take 3 backing track included McCartney on bass; Starr on drums

### **Superimpositions**

- *Mark I (Tomorrow Never Knows)* – superimpositions to take 1 included Lennon on lead vocals; Starr on drums

### **Notes**

Take 1 of *Mark I (Tomorrow Never Knows)* was released on the second of The Beatles' *Anthology* albums and demonstrates that the take was at least considered the “best” version early on, as it was the subject of superimpositions.

Producer Martin is heard on the studio talkback system asking the musicians to stand by as the tape is rolled and a previously recorded backing track started. The backing track utilized frequency control (varispeed), recorded at a speed faster than the playback speed. On it, Harrison stabs a highly distorted, tremolo electric guitar, while Lennon plays a simple four-note melody and Starr holds down a basic beat, predominately with his snare drum. Howlett claims that one of the guitars was played through a Leslie speaker, while the other had a fuzz tone applied.

This backing track is not the same as the take 3 track which is the foundation of the final recording of the song, the contents of which are exposed in The Beatles' *Anthology* DVD.

Lennon's lead vocal was famously treated by being routed through a Leslie speaker, and take 1's entire vocal track is treated with it. However, the final remix of the song reveals that with take 3, only the second part of the vocal receives the treatment. For the first part of the song, the lead vocal is simply double tracked.

While it is commonly believed that the studio's Leslie 122 speaker cabinet was the source of the "Leslie'd" vocals for *Tomorrow Never Knows*, there was another possibility. The Lowrey DSO-I organ had an internal Leslie speaker, which was used to process non-organ sounds at times for Beatles sessions. It is possible for sessions during 1966 in Studio 3 (the default location of the Lowrey) that this was the Leslie speaker used for the track.

In a 2002 interview, Emerick recalls experimenting with mic'ing Starr's tom toms from both above and below during this session and the session for *Paperback Writer*, favouring the studio's STC 4038 microphones for the job.

EMI engineers built many specialized pieces of gear for use in the studio. Among these were "fuzz boxes" that created a controlled distortion from an input (primarily guitar). This fuzz tone sound was used on Beatles

sessions from some of their earliest recordings, though whether it was created with EMI boxes, or third-party gear like the Watkins Electric Music, Ltd. WEM-Rush Pep Box or Vox Tone Bender Professional MKII (during this period) on any particular session is unknown in most instances.

**Sources** - Droney, Maureen. / Emerick, Geoff. pp. 111-113. / Howlett, Keven and Mike Heatley. Pp. 68-70. / Lewisohn, Mark (1). p. 70. / Martin, George and William Pearson. pp. 80, 82. / Rodriguez, Robert. pp. 107, 110. / Ryan, Kevin and Brian Kehew. pp. 412, 423, 424. / The Beatles. "*Mark I (Tomorrow Never Knows) (take 1 with overdubs)*". *Anthology 2*. George Martin, 1996. CD. / The Beatles. *Anthology* (Director's Cut). Dir. Bob Smeaton and Geoff Wonfor. Perf. The Beatles. Apple, 1996. DVD. / Winn, John C. (3). p. 73.

## April 7, 1966

### Time

230PM - 715PM

### Studio name and room

EMI Recording Studios  
Studio 3

### Songs recorded (composer) (activities)

- *Mark I (Tomorrow Never Knows)*  
(Lennon and McCartney)
  - superimposition onto take 3

### Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick

- Tape operator(s): Phil McDonald,  
Unknown additional tape operators  
(5)

## *Monitors*

### Control room

- Altec 605A (Altec 612 Cabinet) with  
EMI RS141 Leak TL/25 Plus  
Amplifier

### Studio

- RLS10 - "White Elephant"
- Vox LS.40 speaker (with four 10"  
Elac speakers), with EMI RS141  
Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K"  
Headphones

## **Musicians (instruments played)**

- John Lennon (tape loops, vocals)
- Paul McCartney (tape loops)
- George Harrison (tape loops)
- Ringo Starr (tape loops)

## **Other Musicians (instruments played)**

- George Martin (tape loops)

## **Recording equipment**

### *Recording console*

- REDD.51

### *Primary tracking machine*

- FOUR-TRACK: 1" Studer J-37
- TWO-TRACK: 1/4" Brenell Mark 5  
Type M Series 3
- STEREO: 1/4" EMI BTR3

### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS158 Fairchild Compressor
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter

### *Effects*

- Leslie speaker
- Tape loops

## *Microphones*

### Vocals

- Neumann U48 or U47/48 (U47/8)
- STC 4038

### Other

- Neumann U48 or U47/48 (U47/8)
- Neumann U67

## **Superimpositions**

- *Mark I (Tomorrow Never Knows)* –  
superimpositions included Lennon  
on lead vocals; Lennon, McCartney,  
Harrison and George Martin on tape  
loops

## **Notes**

Lennon's lead vocal for *Tomorrow Never Knows*  
was again recorded, though the work would

be replaced by new vocal performances on April 22<sup>nd</sup>.

Martin selected 16 of Lennon, McCartney and Harrison's tape loops for consideration on the song. These were later narrowed down to five to eight loops that appear on the final track (Martin recalls the higher number). The five tape loops that have been identified included: Paul's laughter, sped up and sounding like a seagull; a B-flat major orchestral chord from a Jan Sibelius recording; two sitar parts, played backwards; and miscellaneous Mellotron voicings.

Previous accounts have credited McCartney as the sole provider of the tape loops for the track. However, as Lennon was the only Beatle at the time to own a Mellotron, and Harrison was the owner of the sitar, it is likely they provided at least those loops.

The tape loops used in this session were created by Lennon, McCartney and Harrison at their homes using the 1/4" Brenell Mark 5 Type M Series 3 two-track machines. EMI Recording Studios was not equipped with the Brenell machines, so five compatible 1/4" EMI BTR3 stereo machines located throughout the studio were employed to play back the selected loops. The output of the machines was fed into the Studio 2 control room and combined via both the REDD console and the EMI RS144 4-Way Mixer/Premix on their way to the Studer four-track.

**Sources** - Emerick, Geoff. pp. 111-113. / Howlett, Keven and Mike Heatley. Pp. 68-70. / Lewisohn, Mark (1). p. 72. / Martin, George and William Pearson. pp. 80-82. / Reising, Russell. p. 145 / Rodriguez, Robert. p. 108. / Ryan, Kevin and Brian Kehew. pp. 412, 141, 423. /The Beatles. *Anthology* (Director's Cut). Dir. Bob Smeaton and Geoff Wonfor. Perf. The Beatles. Apple, 1996. DVD.

## April 8, 1966

### Time

230PM - 9PM

### Studio name and room

EMI Recording Studios  
Studio 2

### Songs recorded (composer) (activities)

- *Got To Get You Into My Life (remake)*  
(Lennon and McCartney)
  - takes 6-8

### Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

### Musicians (instruments played)

- John Lennon (guitar)
- Paul McCartney (bass, vocals)
- George Harrison (guitar)
- Ringo Starr (drums)

## Instruments

### Electric guitars

#### *Lennon*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1965 Epiphone ES-230TD, Casino

#### *Harrison*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato
- 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato

### Bass guitars

#### *McCartney*

- 1964 Rickenbacker 4001S

### Drums

#### *Starr*

- 1964 Ludwig Oyster Black Pearl “Super Classic” (14” X 22” bass drum/ 9” X 13” rack tom/ 16” X 16” floor tom/ 1963 14” X 5.5” “Jazz Festival” snare); Paiste, Zyn, Zildjian cymbals (20” crash/ride; 20” Zyn 4-rivet “sizzle”) Zildjian cymbals (18” crash/ride; 14” model A hi-hats) (Ludwig Set 3)

## Amplifiers

### Guitar

#### *Harrison*

- 1966 JMI Vox 7120, 120W head with cabinet, 4X12" Vox Celestion Alnico Silver T1088 speakers and 2X Midax HF horns
- 1966 Fender Showman (Blackface), 85W head with cabinet, 1X15" JBL D130F speaker

### Bass

#### *McCartney*

- 1963 Fender Bassman 6G6-A (Blonde), 50W head with cabinet, with two 12” Jensen C12N or Oxford 12M6 speakers
- 1966 Vox 4120 bass, 120W head with cabinet, 2X15" Vox Celestion Alnico speakers and two Midax HF horns

## Recording equipment

#### *Recording console*

- REDD.51

#### *Primary tracking machine*

- FOUR-TRACK: 1” Studer J-37

#### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix

- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter

## Effects

- Double tracking
- Frequency control (varispeed)

## Monitors

### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

### Studio

- RLS10 - "White Elephant"
- Vox LS.40 speaker (with four 10" Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

## Microphones

### Vocals

- Neumann U48 or U47/48 (U47/8)

### Electric guitar amplifiers

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

### Bass amplifier

- AKG D20
- Neumann U67

### Drums

- Overhead - AKG D19c
- Bass drum - AKG D20
- Under-snare - Neumann KM56

### Other

- Neumann U48 or U47/48 (U47/8)

## Backing tracks

- *Got To Get You Into My Life (remake)* – backing track included McCartney on bass; Lennon on guitar; Harrison on guitar; Starr on drums

## Notes

The backing track for *Got To Get You Into My Life* was recorded with varispeed at a slower than normal tape speed in order to sound faster on playback.

**Sources** - Howlett, Keven and Mike Heatley. Pp. 46, 47, 66, 67. /Lewisohn, Mark (1). p. 72. / Ryan, Kevin and Brian Kehew. p. 423. / The Beatles. "*Got To Get You Into My Life*". Rec.8, 11 April, 18 May, 17, 20 June 1966. The Beatles. FLAC audio file.

## April 11-12, 1966

### Time

230PM - 1AM

### Studio name and room

EMI Recording Studios

- Studio 2
  - 230PM – 7PM
  - 8PM – 1245AM)
- Studio 2 (control room)
  - 1245AM – 1AM

### Songs recorded (composer) (activities)

- *Got To Get You Into My Life* (Lennon and McCartney)
  - superimposition onto take 8
- *Granny Smith (Love You To)* (Harrison)
  - takes 1-6
  - superimposition onto take 6

### Songs mixed (version) (remix number and take)

- *Granny Smith (Love You To)* (mono)
  - remix (RM) 1 from take 6

### Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

### Musicians (instruments played)

- John Lennon (vocals)

- Paul McCartney (bass, tamboura, vocals)
- George Harrison (guitar, sitar, vocals)

### Other Musicians (instruments played)

- Anil Bhagwat (tabla)

### Instruments

#### Electric guitars

##### *Harrison*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato
- 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato

#### Acoustic guitars

##### *Harrison*

- 1962 Gibson J-160E

##### *Lennon*

- 1964 Gibson J-160E

#### Bass guitars

##### *McCartney*

- 1964 Rickenbacker 4001S

## Other

- 1966 Rikhi Ram Sitar (made by Bishan Dass Sharma)
- Tamboura

## Amplifiers

### Guitar

#### *Harrison*

- 1966 JMI Vox 7120, 120W head with cabinet, 4X12" Vox Celestion Alnico Silver T1088 speakers and 2X Midax HF horns
- 1966 Fender Showman (Blackface), 85W head with cabinet, 1X15" JBL D130F speaker

### Bass

#### McCartney

- 1963 Fender Bassman 6G6-A (Blonde), 50W head with cabinet, with two 12" Jensen C12N or Oxford 12M6 speakers
- 1966 Vox 4120 bass, 120W head with cabinet, 2X15" Vox Celestion Alnico speakers and two Midax HF horns

## Recording equipment

#### *Recording console*

- REDD.51

#### *Primary tracking machine*

- FOUR-TRACK: 1" Studer J-37

#### *Mixdown machine*

- MONO: 1/4" EMI BTR2

#### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS158 Fairchild Compressor
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter

#### *Effects*

- Double tracking
- Echo chamber (includes RS61 Low Level Amplifier with RS62 Power Supply and RS106A Echo Control Unit – Band Pass Filter)
- STEED (send tape echo/echo delay)

#### *Monitors*

#### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

#### Studio

- RLS10 - "White Elephant"
- Vox LS.40 speaker (with four 10" Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

### *Microphones*

#### Vocals

- Neumann U48 or U47/48 (U47/8)

#### Electric guitar amplifiers

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

#### Acoustic guitars

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

#### Bass amplifier

- AKG D20

#### Other

- Neumann U48 or U47/48 (U47/8)

STC 4033-A

### **Backing tracks**

- *Granny Smith (Love You To)* – backing track included Harrison on acoustic guitar and lead vocals; McCartney on backing vocals

### **Superimpositions**

- *Got To Get You Into My Life* – superimpositions included McCartney on bass; Harrison on guitar; McCartney on lead vocals;

Lennon and Harrison on backing vocals

- *Granny Smith (Love You To)* – superimpositions included Harrison on sitar; Harrison on fuzz guitar; Anil Bhagwat on tabla

### **Notes**

Lewisohn noted that in the session for the song on May 18<sup>th</sup>, vocals that had been previously recorded were replaced. Since no vocals were tracked in the song's initial session, it can be assumed that this session included the original vocal work on the song.

EMI engineers built many specialized pieces of gear for use in the studio. Among these were “fuzz boxes” that created a controlled distortion from an input (primarily guitar). This fuzz tone sound was used on Beatles session from some of their earliest recordings, though whether it was created with EMI boxes, or third-party gear like the Watkins Electric Music, Ltd. WEM-Rush Pep Box or Vox Tone Bender Professional MKII (during this period) on any particular session is unknown in most instances.

At this point in its recording, *Love You To* did not include the 34-second solo sitar introduction. The part was remixed as an edit piece from work in this session on April 25<sup>th</sup>.

Emerick recalls mic'ing the tabla with a “ribbon” microphone, placed very close. The primary ribbon microphone in use at EMI Recording Studios at the time was the STC 4033-A.

**Sources** - Emerick, Geoff. p. 125. / Howlett, Keven and Mike Heatley. Pp. 46, 47, 66, 67. / Lewisohn, Mark (1). p. 72. / Rodriguez, Robert. p. 112. / Winn, John C. (3). p. 74.

## April 13-14, 1966

### Time

230PM - 230AM

### Studio name and room

EMI Recording Studios  
Studio 3

- 230PM – 630PM
- 8PM – 230AM

### Songs recorded (composer) (activities)

- *Granny Smith (Love You To)* (Harrison)
  - tape reduction of take 6 into take 7
  - superimposition recording onto take 7
- *Paperback Writer* (Lennon and McCartney)
  - takes 1 and 2

### Songs mixed (version) (remix number and take)

- *Granny Smith (Love You To)* (mono)
  - remix (RM) 1-3 from take 7

### Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Richard Lush

### Musicians (instruments played)

- John Lennon (guitar, tambourine, vocals) (see Notes)
- Paul McCartney (guitar, vocals)
- George Harrison (guitar, tambourine, vocals) (see Notes)
- Ringo Starr (drums)

### Instruments

#### Electric guitars

##### *Lennon*

- 1963 Gretsch PX6120 Nashville

##### *Harrison*

- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato

##### *McCartney*

- 1962 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato (strung left-handed)

### Drums

##### *Starr*

- 1964 Ludwig Oyster Black Pearl “Super Classic” (14” X 22” bass drum/ 9” X 13” rack tom/ 16” X 16” floor tom/ 1963 14” X 5.5” “Jazz Festival” snare); Paiste, Zyn, Zildjian cymbals (20” crash/ride; 20” Zyn 4-rivet “sizzle”) Zildjian

cymbals (18” crash/ride; 14” model A hi-hats) (Ludwig Set 3)

## Percussion

- Tambourine (Olympic or Ludwig)

## Amplifiers

## Guitar

### *Harrison*

- 1966 JMI Vox 7120, 120W head with cabinet, 4X12" Vox Celestion Alnico Silver T1088 speakers and 2X Midax HF horns

### *McCartney*

- 1963 Fender Bassman 6G6-A (Blonde), 50W head with cabinet, with two 12” Jensen C12N or Oxford 12M6 speakers

## Recording equipment

### *Recording console*

- REDD.51

### *Primary tracking machine*

- FOUR-TRACK: 1” Studer J-37

### *Mixdown machine*

- MONO: 1/4” EMI BTR2

## *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter
- Frequency Control Rack (Vortexion S.120 amplifier with Level TG 150M oscillator)

## *Effects*

- ADT (artificial double tracking)
- Double tracking
- Echo chamber (includes RS61 Low Level Amplifier with RS62 Power Supply and RS106A Echo Control Unit – Band Pass Filter)
- STEED (send tape echo/echo delay)

## *Monitors*

### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

### Studio

- RLS10 - “White Elephant”
- Vox LS.40 speaker (with four 10” Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

### *Microphones*

#### Vocals

- Neumann U48 or U47/48 (U47/8)

#### Electric guitar amplifiers

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

#### Drums

- Overhead - AKG D19c
- Bass drum - AKG D20
- Under-snare - Neumann KM56
- Tom toms – STC 4038

#### Other

- Neumann U48 or U47/48 (U47/8)

### **Backing tracks**

- *Paperback Writer* – backing track included McCartney on guitar; Harrison on guitar; Lennon on tambourine; Starr on drums

### **Superimpositions**

- *Granny Smith (Love You To)* – superimpositions included Harrison on guitar; McCartney on backing vocals; Starr on tambourine

### **Notes**

McCartney is believed to be playing the key lead guitar line for *Paperback Writer*. In audio evidence from take 1, producer Martin is

heard saying, “Here it goes, Paul: It’s all yours, Paul.” Then McCartney can be heard to count in and begin the tune with some ghost chords prior to the lead guitar introduction (the chords were placeholders for the harmony vocals that open the song).

In take 2, Harrison, McCartney and Starr are heard discussing the tempo of the song, Harrison noting the tempo “picking up speed” and McCartney replying that “It’s a little bit better I think at this speed...”.

Harrison's guitar has mistakenly been identified as being played through a Leslie speaker cabinet during this session. The first use of a Leslie on The Beatles' work (*Tomorrow Never Knows*) was a mere seven days earlier, and despite the rapid speed with which The Beatles adopted innovative approaches to their sound, there is no evidence that the pairing of guitar and Leslie speaker was being adopted at this time. The vibrato heard in Harrison's guitar work can be attributed to the Vox 7120 amplifier, which provided self-contained vibrato (tremolo), distortion, and reverb capabilities.

Photographic evidence from this session shows Lennon rehearsing with his 1963 Gretsch PX6120 Nashville, though there is no evidence that Lennon recorded any guitar work on this date. The guitar was put up for sale at auction in 2014, claiming it was the one Lennon “used to record The Beatles' *Paperback Writer*”. In advertising for the sale,

it was purported that the guitar was still a “spare” in the studio as late as 1967.

In a 2002 interview, Emerick recalls experimenting with mic'ing Starr's tom toms from both above and below during this session and the session for *Tomorrow Never Knows*, favouring the studio's STC 4038 microphones for the job.

**Sources** - Droney, Maureen. / Everett, Walter (2). pp. 42, 43. / Howlett, Keven and Mike Heatley. Pp. 46, 47. / Lewisohn, Mark (1). p. 73. / Munro, Scott. “Lennon Guitar Goes under the Hammer. *“Classic Rock*, Classic Rock, 7 Oct. 2014, teamrock.com/news/2014-10-08/lennon-guitar-goes-under-the-hammer. / Mytkowicz, Bob. / Ryan, Kevin and Brian Kehew. pp. 414, 415. / The Beatles. “*Paperback Writer (take 1)*”. Rec.13 April 1966. The Beatles. FLAC audio file. / The Beatles. “*Paperback Writer (take 2)*”. Rec.13 April 1966. The Beatles. FLAC audio file. / Winn, John C. (3). p. 75.

## April 16-17, 1966

### Time

230PM - 130AM

### Studio name and room

EMI Recording Studios  
Studio 2

### Songs recorded (composer) (activities)

- *Rain* (Lennon and McCartney)
  - superimposition onto take 5
  - tape reduction of take 5 into takes 6-8
  - superimposition onto take 7

### Songs mixed (version) (remix number and take)

- *Rain* (mono)
  - remix (RM) 1-4 from take 7

### Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

### Musicians (instruments played)

- John Lennon (vocals)
- Paul McCartney (bass, vocals)
- George Harrison (vocals)
- Ringo Starr (tambourine)

### Instruments

#### Bass guitars

*McCartney*

- 1962-1963 Hofner 500/1
- 1964 Rickenbacker 4001S

#### Percussion

- Tambourine (Olympic or Ludwig)

### Amplifiers

#### Bass

*McCartney*

- 1963 Fender Bassman 6G6-A (Blonde), 50W head with cabinet,

with two 12" Jensen C12N or Oxford 12M6 speakers

- 1966 Vox 4120 bass, 120W head with cabinet, 2X15" Vox Celestion Alnico speakers and two Midax HF horns

## **Recording equipment**

### *Recording console*

- REDD.51

### *Primary tracking machine*

- FOUR-TRACK: 1" Studer J-37

### *Mixdown machine*

- MONO: 1/4" EMI BTR2

### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter
- Frequency Control Rack (Vortexion S.120 amplifier with Level TG 150M oscillator)

### *Effects*

- ADT (artificial double tracking)
- Backward audio
- Echo chamber (includes RS61 Low Level Amplifier with RS62 Power Supply and RS106A Echo Control Unit – Band Pass Filter)

- Frequency control (varispeed)
- STEED (send tape echo/echo delay)

### *Monitors*

#### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

#### Studio

- RLS10 - "White Elephant"
- Vox LS.40 speaker (with four 10" Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

### *Microphones*

#### Vocals

- Neumann U48 or U47/48 (U47/8)

#### Bass amplifier

- AKG D20

#### Other

- Neumann U48 or U47/48 (U47/8)

## **Superimpositions**

- *Rain* – superimpositions included McCartney on bass; Lennon on double tracked lead vocals; Lennon, McCartney and Harrison on backing

vocals; Starr on tambourine;  
backwards audio vocals

## Remixes

Mono master remixes

- *Rain* (mono) (remix (RM) 3 from take 7)

## Notes

This session included the addition of the backward audio of Lennon's lead vocal on *Rain*. On remix, ADT (artificial double tracking) was added to Lennon's lead vocal.

In a 1990 interview with Tom Mulhern, McCartney claims to have played his Hofner bass on *Paperback Writer*. While worth noting, there is no evidence to support this claim. Session photos do not reveal the presence of the Hofner. The bass is included in this session, as despite the evidence, it cannot be ruled out entirely.

**Sources** - Howlett, Keven and Mike Heatley. Pp. 76, 77. / Lewisohn, Mark (1). p. 75. / Mulhern, Tom. / The Beatles. "*Rain (take 7)*". Rec.14, 16 April 1966. The Beatles. FLAC audio file. / The Beatles. "*Rain*". Rec.14, 16 April 1966. The Beatles. FLAC audio file. / Winn, John C. (3). p. 75

April 17, 1966

## Time

230PM - 1030PM

## Studio name and room

EMI Recording Studios  
Studio 2

## Songs recorded (composer) (activities)

- *Doctor Robert* (Lennon and McCartney)
  - unnumbered rehearsal takes
  - takes 1-7
  - superimposition onto take 7

## Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

## Musicians (instruments played)

- John Lennon (guitar, harmonium)
- Paul McCartney (bass)
- George Harrison (guitar, percussion)
- Ringo Starr (drums)

## Instruments

### Electric guitars

*Lennon*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1965 Epiphone ES-230TD, Casino

*Harrison*

- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato

**Bass guitars**

*McCartney*

- 1964 Rickenbacker 4001S

**Drums**

*Starr*

- 1964 Ludwig Oyster Black Pearl “Super Classic” (14” X 22” bass drum/ 9” X 13” rack tom/ 16” X 16” floor tom/ 1963 14” X 5.5” “Jazz Festival” snare); Paiste, Zyn, Zildjian cymbals (20” crash/ride; 20” Zyn 4-rivet “sizzle”) Zildjian cymbals (18” crash/ride; 14” model A hi-hats) (Ludwig Set 3)

**Percussion**

- Maracas

**Pianos and keyboards**

- Mannborg harmonium

**Amplifiers**

**Guitar**

*Lennon/Harrison*

- 1966 JMI Vox 7120, 120W head with cabinet, 4X12" Vox Celestion Alnico Silver T1088 speakers and 2X Midax HF horns
- 1966 Fender Showman (Blackface), 85W head with cabinet, 1X15" JBL D130F speaker

**Bass**

*McCartney*

- 1963 Fender Bassman 6G6-A (Blonde), 50W head with cabinet, with two 12” Jensen C12N or Oxford 12M6 speakers
- 1966 Vox 4120 bass, 120W head with cabinet, 2X15" Vox Celestion Alnico speakers and two Midax HF horns

**Recording equipment**

*Recording console*

- REDD.51

*Primary tracking machine*

- FOUR-TRACK: 1” Studer J-37

*Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix

- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter

### *Monitors*

#### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

#### Studio

- RLS10 - "White Elephant"
- Vox LS.40 speaker (with four 10" Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

### *Microphones*

#### Vocals

- Neumann U48 or U47/48 (U47/8)

#### Electric guitar amplifiers

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

#### Bass amplifier

- AKG D20

#### Drums

- Overhead - AKG D19c

- Bass drum - AKG D20
- Under-snare - Neumann KM56

#### Piano

- Neumann U48 or U47/48 (U47/8)
- Neumann U67
- AKG D19c

#### Other

- Neumann U48 or U47/48 (U47/8)

### **Backing tracks**

- *Doctor Robert* – backing track included Lennon on guitar; Harrison on maracas; Starr on drums

### **Superimpositions**

- *Doctor Robert* – superimpositions included McCartney on bass; Lennon on harmonium; Harrison on guitar

**Sources** - Howlett, Keven and Mike Heatley. Pp. 62, 63. / Lewisohn, Mark (1). p. 75. / The Beatles. "*Doctor Robert*". Rec.17, 19 April 1966. The Beatles. FLAC audio file.

April 26-27, 1966

**Time**

230PM - 245AM

**Studio name and room**

EMI Recording Studios  
Studio 2

**Songs recorded (composer) (activities)**

- *And Your Bird Can Sing (remake)*  
(Lennon and McCartney)
  - takes 3-13
  - superimposition onto takes 6 and 10

**Studio Personnel**

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

**Musicians (instruments played)**

- John Lennon (guitar, vocals)
- Paul McCartney (bass, guitar, vocals)
- George Harrison (guitar, vocals)
- Ringo Starr (drums, percussion)

**Instruments**

**Electric guitars**

*Lennon*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1965 Epiphone ES-230TD, Casino

*Harrison*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato
- 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato
- 1965 Rickenbacker 360-12 (12-string)

**Bass guitars**

*McCartney*

- 1964 Rickenbacker 4001S

**Drums**

*Starr*

- 1964 Ludwig Oyster Black Pearl “Super Classic” (14” X 22” bass drum/ 9” X 13” rack tom/ 16” X 16” floor tom/ 1963 14” X 5.5” “Jazz Festival” snare); Paiste, Zyn, Zildjian cymbals (20” crash/ride; 20” Zyn 4-rivet “sizzle”) Zildjian cymbals (18” crash/ride; 14” model A hi-hats) (Ludwig Set 3)

**Percussion**

- Tambourine (Olympic or Ludwig)

## Amplifiers

### Guitar

*Lennon/Harrison*

- 1966 JMI Vox 7120, 120W head with cabinet, 4X12" Vox Celestion Alnico Silver T1088 speakers and 2X Midax HF horns
- 1966 Fender Showman (Blackface), 85W head with cabinet, 1X15" JBL D130F speaker

### Bass

*McCartney*

- 1963 Fender Bassman 6G6-A (Blonde), 50W head with cabinet, with two 12" Jensen C12N or Oxford 12M6 speakers
- 1966 Vox 4120 bass, 120W head with cabinet, 2X15" Vox Celestion Alnico speakers and two Midax HF horns

## Recording equipment

*Recording console*

- REDD.51

*Primary tracking machine*

- FOUR-TRACK: 1" Studer J-37

*Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix

- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter
- Frequency Control Rack (Vortexion S.120 amplifier with Level TG 150M oscillator)

*Effects*

- Double tracking
- Frequency control (varispeed)

*Monitors*

Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

Studio

- RLS10 - "White Elephant"
- Vox LS.40 speaker (with four 10" Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

*Microphones*

Vocals

- Neumann U48 or U47/48 (U47/8)

Electric guitar amplifiers

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

## Bass amplifier

- AKG D20

## Drums

- Overhead - AKG D19c
- Bass drum - AKG D20
- Under-snare - Neumann KM56

## Other

- Neumann U48 or U47/48 (U47/8)

## Backing tracks

- *And Your Bird Can Sing* – backing track included Lennon on guitar; Harrison on 12-string guitar; McCartney on bass; Starr on drums

## Superimpositions

- *And Your Bird Can Sing* – superimpositions included Harrison and McCartney on lead guitar; Lennon on lead vocals; McCartney and Harrison on backing vocals and handclaps; McCartney on bass; Unknown on tambourine; Starr on hi-hat and cymbals

**Sources** - Howlett, Keven and Mike Heatley. Pp. 58, 59. / Lewisohn, Mark (1). p. 77. / The Beatles. “*And Your Bird Can Sing*”. *Revolver*. George Martin, 1966. Vinyl, FLAC audio file. / Winn, John C. (3). p. 77.

May 5-6, 1966

## Time

930PM - 3AM

## Studio name and room

EMI Recording Studios  
Studio 3

## Songs recorded (composer) (activities)

- *I'm Only Sleeping* (Lennon and McCartney)
  - superimposition onto take 11

## Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

## Musicians (instruments played)

- Paul McCartney (guitar)
- George Harrison (guitar)

## Instruments

## Electric guitars

### *Harrison*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato
- 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato

## Amplifiers

### Guitar

#### *Harrison*

- 1966 JMI Vox 7120, 120W head with cabinet, 4X12" Vox Celestion Alnico Silver T1088 speakers and 2X Midax HF horns
- 1966 Fender Showman (Blackface), 85W head with cabinet, 1X15" JBL D130F speaker

### Recording equipment

#### *Recording console*

- REDD.51

#### *Primary tracking machine*

- FOUR-TRACK: 1" Studer J-37

#### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter

#### *Effects*

- Backwards audio

## Monitors

### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

### Studio

- RLS10 - "White Elephant"
- Vox LS.40 speaker (with four 10" Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

## Microphones

### Electric guitar amplifiers

- Neumann U47/48 (U47/8)

### Bass amplifiers

- AKG D20

## Superimpositions

- *I'm Only Sleeping* – superimpositions included McCartney and Harrison on lead and fuzz lead guitars

## Notes

While Lewisohn noted that Harrison played the guitar solos on *I'm Only Sleeping*, both Martin (in an *Anthology* interview) and later Emerick (in his own autobiography) recall that both Harrison and McCartney played the solos for the track.

EMI engineers built many specialized pieces of gear for use in the studio. Among these were “fuzz boxes” that created a controlled distortion from an input (primarily guitar). This fuzz tone sound was used on Beatles session from some of their earliest recordings, though whether it was created with EMI boxes, or third-party gear like the Watkins Electric Music, Ltd. WEM-Rush Pep Box or Vox Tonebender (during this period) on any particular session is unknown in most instances.

**Sources** - Emerick, Geoff. p. 124. / Lewisohn, Mark (1). p. 78. / Rodriguez, Robert. pp. 130, 131. / Ryan, Kevin and Brian Kehew. p. 425. / The Beatles. *Anthology* (Director’s Cut). Dir. Bob Smeaton and Geoff Wonfor. Perf. The Beatles. Apple, 1996. DVD.

## May 6-7, 1966

### Time

230PM - 215AM

### Studio name and room

EMI Recording Studios

- Studio 2
  - 230PM – 1AM
- Studio 2 (control room)
  - 1AM – 215AM

### Songs recorded (composer) (activities)

- *I’m Only Sleeping* (Lennon and McCartney)
  - tape reduction of take 11 into takes 12-13

- superimposition onto take 13

### Songs mixed (version) (remix number and take)

- *I’m Only Sleeping* (mono)
  - remix (RM) 1-4 from take 13

### Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

### Musicians (instruments played)

- Paul McCartney (vocals)
- George Harrison (guitar)

### Instruments

#### Electric guitars

*Harrison*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato
- 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato

## Amplifiers

### Guitar

#### *Harrison*

- 1966 JMI Vox 7120, 120W head with cabinet, 4X12" Vox Celestion Alnico Silver T1088 speakers and 2X Midax HF horns
- 1966 Fender Showman (Blackface), 85W head with cabinet, 1X15" JBL D130F speaker

## Recording equipment

#### *Recording console*

- Studio 2 – REDD.51

#### *Primary tracking machine*

- FOUR-TRACK: 1" Studer J-37

#### *Mixdown machine*

- MONO: 1/4" EMI BTR2

#### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter
- Frequency Control Rack (Vortexion S.120 amplifier with Level TG 150M oscillator)

## Effects

- ADT (artificial double tracking)
- Double tracking
- Echo chamber (includes RS61 Low Level Amplifier with RS62 Power Supply and RS106A Echo Control Unit – Band Pass Filter)
- Frequency control (varispeed)
- STEED (send tape echo/echo delay)

## Monitors

### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

### Studio

- RLS10 - "White Elephant"
- Vox LS.40 speaker (with four 10" Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

## Microphones

### Electric guitar amplifiers

- Neumann U47/48 (U47/8)

### Vocals

- Neumann U47/48 (U47/8)

## Superimpositions

- *I'm Only Sleeping* – superimpositions included Lennon, McCartney and Harrison on backing vocals.

## Notes

The yawn on *I'm Only Sleeping* is provided by McCartney. In the stereo remix of the song, Lennon can be heard directing “Yawn, Paul.” at the 1:57 mark.

**Sources** - Lewisohn, Mark (1). p. 78. / Rodriguez, Robert. pp. 130, 131. / Ryan, Kevin and Brian Kehew. p. 425. / The Beatles. “*I'm Only Sleeping*”. *Revolver*. George Martin, 1966. Vinyl recording. FLAC audio file. / Winn, John C. (3). p. 79.

## May 18-19, 1966

### Time

230PM - 230AM

### Studio name and room

EMI Recording Studios  
Studio 2

### Songs recorded (composer) (activities)

- *Got To Get You Into My Life* (Lennon and McCartney)
  - superimposition onto take 8
  - tape reduction of take 8 into takes 9-11
  - superimposition onto take 9

### Songs mixed (version) (remix number and take)

- *Got To Get You Into My Life* (mono)
  - remix (RM) 1 and 2 from take 9

### Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

### Musicians (instruments played)

- John Lennon (organ, vocals)
- Paul McCartney (vocals)
- George Harrison (guitar, vocals)
- Ringo Starr (tambourine)

### Other Musicians (instruments played)

- George Martin (conductor)
- Eddie Thornton (Olds Super trumpet)
- Ian Hammer (trumpet)
- Les Condon (trumpet)
- Alan Branscombe (tenor saxophone)
- Peter Coe (tenor saxophone)

### Instruments

### Pianos and keyboards

- 1965 Vox Continental 300 Organ

### Other

- Tambourine (Olympic or Ludwig)

## Amplifiers

### Vox Organ

- 1963 JMI Vox AC30/6 Twin Treble (Black) with “Top Boost” circuit, 30W with two 12” Vox Celestion Alnico Gray G12 T530 speakers

## Recording equipment

### *Recording console*

- REDD.51

### *Primary tracking machine*

- FOUR-TRACK: 1” Studer J-37

### *Mixdown machine*

- MONO: 1/4” EMI BTR2

### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter

### *Effects*

- Double tracking
- Frequency control (varispeed)

## Monitors

### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

### Studio

- RLS10 - “White Elephant”
- Vox LS.40 speaker (with four 10” Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type “Super K” Headphones

## Microphones

### Vocals

- Neumann U48 or U47/48 (U47/8)

### Electric guitar amplifiers

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

### Other

- Neumann U48 or U47/48 (U47/8)
- RCA 44-BX

## Superimpositions

- *Got To Get You Into My Life* – superimpositions included horn sections; McCartney on double tracked lead vocals; Lennon and Harrison on backing vocals; Lennon on organ; Starr on tambourine

## Notes

All superimpositions to date on *Got To Get You Into My Life* save for the brass sections were scrapped during this session which involved extensive re-recording of the parts.

Both McCartney's lead vocals and the brass additions to the song were recorded with varispeed at a slower than normal tape speed.

Lennon and Harrison's backing vocal contributions to the song did not end up on the final remixes of the song, performed on June 17<sup>th</sup> and 20<sup>th</sup>.

**Sources** - Howlett, Keven and Mike Heatley. Pp. 66, 67. / Lewisohn, Mark (1). p. 79. / Ryan, Kevin and Brian Kehew. pp. 423, 427. / The Beatles. "*Got To Get You Into My Life*". *Revolver*. George Martin, 1966. Vinyl, FLAC audio file. / Winn, John C. (3). p. 82.

## June 1-2, 1966

### Time

230PM – 230AM

### Studio name and room

EMI Recording Studios  
Studio 2

### Songs recorded (composer) (activities)

- *Yellow Submarine* (Lennon and McCartney)
  - superimposition onto take 5

## Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

## Musicians (instruments played)

- John Lennon (sound effects, backing vocals)
- Paul McCartney (sound effects, backing vocals)
- George Harrison (sound effects, backing vocals)
- Ringo Starr (sound effects, backing vocals)

## Other Musicians (instruments played)

- Unknown musicians (brass band)
- Mal Evans (bass drum, backing vocals)
- Neil Aspinall (backing vocals)
- George Martin (backing vocals)
- Geoff Emerick (backing vocals)
- Patti Harrison (backing vocals)
- Brian Jones (sound effects, backing vocals)
- Marianne Faithfull (backing vocals)
- Alf Bicknell (backing vocals)
- John Skinner (sound effects, backing vocals)
- Terry Condon (sound effects, backing vocals)

## Instruments

## Other

- Marching bass drum

## Recording equipment

### *Recording console*

- Studio 2 – REDD.51

### *Primary tracking machine*

- FOUR-TRACK: 1” Studer J-37

### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter
- Frequency Control Rack (Vortexion S.120 amplifier with Level TG 150M oscillator)

### *Effects*

- Double tracking
- Echo chamber (includes RS61 Low Level Amplifier with RS62 Power Supply and RS106A Echo Control Unit – Band Pass Filter)
- Frequency control (varispeed)
- STEED (send tape echo/echo delay)

### *Monitors*

#### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

## Studio

- RLS10 - “White Elephant”
- Vox LS.40 speaker (with four 10” Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

### *Microphones*

#### Vocals

- Neumann U48 or U47/48 (U47/8)

#### Other

- Neumann U48 or U47/48 (U47/8)
- Neumann KM53
- RCA 44-BX

## Superimpositions

- *Yellow Submarine* – superimpositions included brass band; Lennon, McCartney, Harrison and Starr on backing vocals; backing vocals (group chorus); sound effects

## Notes

Lewisohn noted (and Martin concurred in a 1996 *New Music Express* interview) that outside musicians were brought in to play the brass section for the middle section of *Yellow Submarine*. Emerick adamantly recalled that the section was created through the manipulation and editing of pre-recorded tapes, much like the method later used on *Being For The Benefit Of Mr. Kite!* for the *Sgt. Pepper's Lonely Hearts Club Band* album.

In this case, Emerick was accurate. Howlett's 2022 research for the *Revolver Super Deluxe* release revealed that an EMI sound effects tape (Volume 46) containing the song 'Le Rêve Passe' (The Dream Passes), a French patriotic song from the Napoleonic era, *was* the source of the brass band part; edited and slowed down so its pitch and timing matched the key of 'Yellow Submarine' for the allotted solo section after the words, "And the band begins to play..."

The unused "Land O' Groats" introduction recorded in this session included a marching-sound effect that was created with a cardboard box with coals inside being shifted from side to side.

**Sources** - Emerick, Geoff. pp. 122-123, 168. / Howlett, Keven and Mike Heatley. Pp. 50, 51. / Lewisohn, Mark (1). p. 81. / Rodriguez, Robert. pp. 140-142. / Ryan, Kevin and Brian Kehew. pp.172, 428, 429. / The Beatles. "*Yellow Submarine (take 5)*". Rec.26 May, 1 June 1966. The Beatles. FLAC audio file.

## June 2-3, 1966

### Time

7PM - 330AM

### Studio name and room

EMI Recording Studios  
Studio 2

### Songs recorded (composer) (activities)

- *Laxton's Superb (I Don't Know (I Want To Tell You))* (Harrison)
  - takes 1-5
  - superimposition onto take 3

- tape reduction of take 3 into take 4

### Songs mixed (version) (remix number and take)

- *Yellow Submarine* (mono)
  - remix (RM) 1 from take 5 (rough remix)

### Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

### Musicians (instruments played)

- John Lennon (percussion, vocals)
- Paul McCartney (piano, percussion, vocals)
- George Harrison (guitar, vocals)
- Ringo Starr (drums, percussion)

### Instruments

#### Electric guitars

##### *Harrison*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato
- 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato

## Drums

### *Starr*

- 1964 Ludwig Oyster Black Pearl “Super Classic” (14” X 22” bass drum/ 9” X 13” rack tom/ 16” X 16” floor tom/ 1963 14” X 5.5” “Jazz Festival” snare); Paiste, Zyn, Zildjian cymbals (20” crash/ride; 20” Zyn 4-rivet “sizzle”) Zildjian cymbals (18” crash/ride; 14” model A hi-hats) (Ludwig Set 3)

## Percussion

- Maracas
- Tambourine (Olympic or Ludwig)

## Pianos and keyboards

- Steinway “Music Room” Model B Grand Piano (circa 1880s)

## Amplifiers

## Guitar

### *Harrison*

- 1966 JMI Vox 7120, 120W head with cabinet, 4X12" Vox Celestion Alnico Silver T1088 speakers and 2X Midax HF horns
- 1966 Fender Showman (Blackface), 85W head with cabinet, 1X15" JBL D130F speaker

## Recording equipment

### *Recording console*

- REDD.51

### *Primary tracking machine*

- FOUR-TRACK: 1” Studer J-37

### *Mixdown machine*

- MONO: 1/4” EMI BTR2

### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter

### *Effects*

- Echo chamber (includes RS61 Low Level Amplifier with RS62 Power Supply and RS106A Echo Control Unit – Band Pass Filter)
- STEED (send tape echo/echo delay)

### *Monitors*

### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

## Studio

- RLS10 - “White Elephant”
- Vox LS.40 speaker (with four 10” Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

## Microphones

## Vocals

- Neumann U48 or U47/48 (U47/8)

## Electric guitar amplifiers

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

## Drums

- Overhead - AKG D19c
- Bass drum - AKG D20
- Under-snare - Neumann KM56

## Piano

- Neumann U48 or U47/48 (U47/8)
- Neumann U67
- AKG D19c

## Other

- Neumann U48 or U47/48 (U47/8)

## Backing tracks

- *Laxton's Superb (I Don't Know (I Want To Tell You))* – backing track

included Harrison on guitar; McCartney on piano; Lennon on tambourine and maracas; Starr on drums

## Superimpositions

- *Laxton's Superb (I Don't Know (I Want To Tell You))* – superimpositions included Harrison on lead vocals; Lennon and McCartney on backing vocals

## Notes

Another take numbering error occurred with the tape reduction (into take 4) of *Laxton's Superb (I Don't Know (I Want To Tell You))* sharing its take number with a previous backing track take.

**Sources** - Dowlding, William J. p. 144. / Howlett, Keven and Mike Heatley. Pp. 64, 65. / Lewisohn, Mark (1). p. 81. / The Beatles. “*I Want To Tell You*”. *Revolver*. George Martin, 1966. Vinyl, FLAC audio file.

## June 3-4, 1966

## Time

7PM - 230AM

## Studio name and room

EMI Recording Studios  
Studio 2

## Songs recorded (composer) (activities)

- *Laxton's Superb (I Don't Know (I Want To Tell You))* (Harrison)
  - superimposition onto take 4

## Songs mixed (version) (remix number and take)

- *Laxton's Superb (I Don't Know (I Want To Tell You))* (mono)
  - remix (RM) 1-4 from take 4
- *Yellow Submarine* (mono)
  - remix (RM) 1-5 from take 5

## Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

## Musicians (instruments played)

- Paul McCartney (bass)
- Unknown (handclaps)

## Instruments

### Bass guitars

#### *McCartney*

- 1964 Rickenbacker 4001S

## Amplifiers

### Bass

#### *McCartney*

- 1963 Fender Bassman 6G6-A (Blonde), 50W head with cabinet, with two 12" Jensen C12N or Oxford 12M6 speakers
- 1966 Vox 4120 bass, 120W head with cabinet, 2X15" Vox Celestion Alnico speakers and two Midax HF horns

## Recording equipment

### *Recording console*

- REDD.51

### *Primary tracking machine*

- FOUR-TRACK: 1" Studer J-37

### *Mixdown machine*

- MONO: 1/4" EMI BTR2

### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter

### *Monitors*

### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

### Studio

- RLS10 - "White Elephant"
- Vox LS.40 speaker (with four 10" Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

## *Microphones*

### Bass amplifier

- AKG D20

### Superimpositions

- *Laxton's Superb (I Don't Know (I Want To Tell You))* – superimposition of McCartney on bass; Unknown on handclaps

### Remixes

#### Mono master remixes

- *I Want To Tell You* (mono) (remix (RM) 1 from take 4)
- *Yellow Submarine* (mono) (remix (RM) 5 from take 5)

**Sources** - Howlett, Keven and Mike Heatley. Pp. 64, 65. / Lewisohn, Mark (1). p. 82. / Winn, John C. (3). p. 84.

June 8-9, 1966

### Time

1PM - 230AM

### Studio name and room

EMI Recording Studios

- Studio 2 (control room)
  - 1PM – 2PM
- Studio 2
  - 230PM – 230AM

### Songs recorded (composer) (activities)

- *And Your Bird Can Sing* (Lennon and McCartney)
  - edit of remix mono (RM) 9 and 10 (See Notes)
- *A Good Day's Sunshine (Good Day Sunshine)* (Lennon and McCartney)
  - takes 1-3, superimposition onto take 1

### Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Richard Lush

### Musicians (instruments played)

- John Lennon (tambourine, vocals)
- Paul McCartney (piano, vocals)
- George Harrison (bass, vocals)
- Ringo Starr (drums)

## Instruments

### Bass guitars

*Harrison*

- 1964 Burns Nu-Sonic

### Drums

*Starr*

- 1964 Ludwig Oyster Black Pearl “Super Classic” (14” X 22” bass drum/ 9” X 13” rack tom/ 16” X 16” floor tom/ 1963 14” X 5.5” “Jazz Festival” snare); Paiste, Zyn, Zildjian cymbals (20” crash/ride; 20” Zyn 4-rivet “sizzle”) Zildjian cymbals (18” crash/ride; 14” model A hi-hats) (Ludwig Set 3)

### Percussion

- Tambourine (Olympic or Ludwig)

### Pianos and keyboards

- Steinway “Music Room” Model B Grand Piano (circa 1880s)

## Amplifiers

### Bass

*Harrison*

- 1963 Fender Bassman 6G6-A (Blonde), 50W head with cabinet, with two 12” Jensen C12N or Oxford 12M6 speakers

- 1966 Vox 4120 bass, 120W head with cabinet, 2X15" Vox Celestion Alnico speakers and two Midax HF horns

## Recording equipment

*Recording console*

- REDD.51

*Primary tracking machine*

- FOUR-TRACK: 1” Studer J-37

*Mixdown machine*

- MONO: 1/4” EMI BTR2

*Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter

*Effects*

- Frequency control (varispeed)

*Monitors*

Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

## Studio

- RLS10 - “White Elephant”
- Vox LS.40 speaker (with four 10” Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

## Microphones

## Vocals

- Neumann U48 or U47/48 (U47/8)

## Bass amplifier

- AKG D20

## Drums

- Overhead - AKG D19c
- Bass drum - AKG D20
- Under-snare - Neumann KM56

## Piano

- Neumann U67

## Other

- Neumann U48 or U47/48 (U47/8)

## Backing tracks

- *A Good Day's Sunshine (Good Day Sunshine)* – backing track included McCartney on piano; Harrison on bass; Lennon and tambourine; Starr on drums

## Superimpositions

- *A Good Day's Sunshine (Good Day Sunshine)* – superimpositions included McCartney on lead vocals; Lennon and Harrison on backing vocals

## Notes

Lewisohn noted the edit of *And Your Bird Can Sing* occurring in this session, though Barrett's tape log places work on the reel squarely within the previous June 6<sup>th</sup> and 7<sup>th</sup> session.

**Sources** - Howlett, Keven and Mike Heatley. Pp. 56, 57. / Lewisohn, Mark (1). p. 82. / Lewisohn, Mark (2). pp. 224, 225. / The Beatles. “*Good Day Sunshine*”. *Revolver*. George Martin, 1966. Vinyl, FLAC audio file. / Winn, John C. (3). pp. 80, 85.

## June 9, 1966

## Time

230PM - 8PM

## Studio name and room

EMI Recording Studios

Studio 2

## Songs recorded (composer) (activities)

- *A Good Day's Sunshine (Good Day Sunshine)* (Lennon and McCartney)
  - superimposition onto take 1

## Songs mixed (version) (remix number and take)

- *A Good Day's Sunshine (Good Day Sunshine)* (mono)
  - remix (RM) 1-6 from take 1

## Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

## Musicians (instruments played)

- John Lennon (percussion, vocals)
- Paul McCartney (percussion, vocals)
- George Harrison (percussion, vocals)
- Ringo Starr (drums)

## Other Musicians (instruments played)

- George Martin (piano)

## Instruments

### Drums

#### *Starr*

- 1964 Ludwig Oyster Black Pearl “Super Classic” (14” X 22” bass drum/ 9” X 13” rack tom/ 16” X 16” floor tom/ 1963 14” X 5.5” “Jazz Festival” snare); Paiste, Zyn, Zildjian cymbals (20” crash/ride; 20” Zyn 4-rivet “sizzle”) Zildjian cymbals (18” crash/ride; 14” model A hi-hats) (Ludwig Set 3)

## Percussion

- Handclaps

## Pianos and keyboards

- Steinway “Music Room” Model B Grand Piano (circa 1880s)

## Recording equipment

### *Recording console*

- REDD.51

### *Primary tracking machine*

- FOUR-TRACK: 1” Studer J-37

### *Mixdown machine*

- MONO: 1/4” EMI BTR2

### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter
- Frequency Control Rack (Vortexion S.120 amplifier with Level TG 150M oscillator)

### *Effects*

- ADT (artificial double tracking)
- Echo chamber (includes RS61 Low Level Amplifier with RS62 Power

Supply and RS106A Echo Control Unit – Band Pass Filter)

- Frequency control (varispeed)
- STEED (send tape echo/echo delay)

### *Monitors*

#### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

#### Studio

- RLS10 - “White Elephant”
- Vox LS.40 speaker (with four 10” Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type "Super K" Headphones

### *Microphones*

#### Vocals

- Neumann U48 or U47/48 (U47/8)

#### Drums

- Overhead - AKG D19c
- Bass drum - AKG D20
- Under-snare - Neumann KM56

#### Piano

- Neumann U48 or U47/48 (U47/8)
- Neumann U67
- AKG D19c

#### Other

- Neumann U48 or U47/48 (U47/8)

### **Superimpositions**

- *A Good Day's Sunshine (Good Day Sunshine)* – superimpositions included George Martin on piano; Starr on drums; Lennon, McCartney and Harrison on backing vocals; Lennon, McCartney and Harrison on handclaps

**Sources** - Dowlding, William J. p. 141. / Howlett, Keven and Mike Heatley. Pp. 56, 57. / Lewisohn, Mark (1). p. 83. / The Beatles. “*Good Day Sunshine*”. *Revolver*. George Martin, 1966. Vinyl, FLAC audio file.

## June 16-17, 1966

### **Time**

7PM - 330AM

### **Studio name and room**

EMI Recording Studios  
Studio 2

### **Songs recorded (composer) (activities)**

- *Here, There and Everywhere* (Lennon and McCartney)
  - takes 5-13
  - superimposition onto take 13
  - tape reduction of take 13 into take 14
  - superimposition onto take 14

## Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

## Musicians (instruments played)

- John Lennon (vocals)
- Paul McCartney (guitar, bass, vocals)
- George Harrison (guitar, vocals)
- Ringo Starr (drums)

## Instruments

### Electric guitars

#### *Harrison*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato
- 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato
- 1965 Rickenbacker 360-12 (12-string)

#### *McCartney*

- 1962 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato (strung left-handed)

### Bass guitars

#### *McCartney*

- 1964 Rickenbacker 4001S

## Drums

#### *Starr*

- 1964 Ludwig Oyster Black Pearl “Super Classic” (14” X 22” bass drum/ 9” X 13” rack tom/ 16” X 16” floor tom/ 1963 14” X 5.5” “Jazz Festival” snare); Paiste, Zyn, Zildjian cymbals (20” crash/ride; 20” Zyn 4-rivet “sizzle”) Zildjian cymbals (18” crash/ride; 14” model A hi-hats) (Ludwig Set 3)

## Amplifiers

### Guitar

#### *Harrison/McCartney*

- 1966 JMI Vox 7120, 120W head with cabinet, 4X12" Vox Celestion Alnico Silver T1088 speakers and 2X Midax HF horns
- 1966 Fender Showman (Blackface), 85W head with cabinet, 1X15" JBL D130F speaker
- 1963 Fender Bassman 6G6-A (Blonde), 50W head with cabinet, with two 12" Jensen C12N or Oxford 12M6 speakers

### Bass

#### *McCartney*

- 1963 Fender Bassman 6G6-A (Blonde), 50W head with cabinet, with two 12" Jensen C12N or Oxford 12M6 speakers
- 1966 Vox 4120 bass, 120W head with cabinet, 2X15" Vox Celestion

Alnico speakers and two Midax HF horns

### **Recording equipment**

#### *Recording console*

- REDD.51

#### *Primary tracking machine*

- FOUR-TRACK: 1” Studer J-37

#### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter
- Frequency Control Rack (Vortexion S.120 amplifier with Level TG 150M oscillator)

#### *Effects*

- Double tracking
- Frequency control (varispeed)

#### *Monitors*

#### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

#### Studio

- RLS10 - “White Elephant”

- Vox LS.40 speaker (with four 10” Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type “Super K” Headphones

#### *Microphones*

#### Vocals

- Neumann U48 or U47/48 (U47/8)

#### Electric guitar amplifiers

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

#### Bass amplifier

- AKG D20

#### Drums

- Overhead - AKG D19c
- Bass drum - AKG D20
- Under-snare - Neumann KM56

### **Backing tracks**

- *Here, There and Everywhere* – backing track included McCartney on guitar; Harrison on guitar; Starr on drums

### **Superimpositions**

- *Here, There and Everywhere* – superimpositions included McCartney on lead vocals; McCartney on bass; McCartney, Lennon and Harrison on backing vocals and finger snaps

## Notes

Confirmed by Howlett in 2022, the backing track for *Here, There and Everywhere* included Harrison's middle-eight guitar figures. They were doubled in the following session along with McCartney's lead vocal. Lewisohn and Winn also note the tape reduction of take 13 into take 14 only opened up a single track for additional work, but this would not leave tracks available for the two full vocal performances that followed (one on this day). Howlett confirmed in 2022 that two tracks were made available for this work to be completed. McCartney's vocal was recorded with frequency control, the backing track slowed down slightly in order for the result to sound more fragile on playback at normal speed.

**Sources** - Howlett, Keven and Mike Heatley. Pp. 48, 49. / Lewisohn, Mark (1). p. 83. / The Beatles. "*Here, There and Everywhere*". *Revolver*. George Martin, 1966. Vinyl, FLAC audio file. / The Beatles. "*Here, There and Everywhere (take 14)*". Rec. 17 June 1966. The Beatles. FLAC audio file. / The Beatles. "*Here, There and Everywhere (take 14a)*". Rec. 17 June 1966. The Beatles. FLAC audio file. / The Beatles. "*Here, There and Everywhere (take 14b)*". Rec. 17 June 1966. The Beatles. FLAC audio file. / The Beatles. "*Here, There and Everywhere (take 14c)*". Rec. 17 June 1966. The Beatles. FLAC audio file. / The Beatles. "*Here, There and Everywhere (take 14d)*". Rec. 17 June 1966. The Beatles. FLAC audio file. / Winn, John, C. (3). p. 86.

## June 17-18, 1966

### Time

7PM - 130AM

### Studio name and room

EMI Recording Studios  
Studio 2

### Songs recorded (composer) (activities)

- *Here, There and Everywhere* (Lennon and McCartney)
  - superimposition onto take 14
- *Got To Get You Into My Life* (Lennon and McCartney)
  - superimposition onto take 9

### Songs mixed (version) (remix number and take)

- *Got To Get You Into My Life* (mono)
  - remix (RM) 3-7 from take 9
- *Here, There and Everywhere* (mono)
  - remix (RM) 1 from take 14

### Studio Personnel

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

### Musicians (instruments played)

- Paul McCartney (guitar, vocals)
- George Harrison (guitar)

## Instruments

### Electric guitars

#### *Harrison*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato
- 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato
- 1965 Rickenbacker 360-12 (12-string)

#### *McCartney*

- 1962 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato (strung left-handed)

### Other

- Leslie 122 speaker cabinet

## Amplifiers

### Guitar

#### *Harrison/McCartney*

- 1966 JMI Vox 7120, 120W head with cabinet, 4X12" Vox Celestion Alnico Silver T1088 speakers and 2X Midax HF horns
- 1966 Fender Showman (Blackface), 85W head with cabinet, 1X15" JBL D130F speaker

## Recording equipment

### *Primary tracking machine*

- FOUR-TRACK: 1" Studer J-37

### *Mixdown machine*

- MONO: 1/4" EMI BTR2

### *Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control (Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter
- Frequency Control Rack (Vortexion S.120 amplifier with Level TG 150M oscillator)

### *Effects*

- Double tracking
- Echo chamber (includes RS61 Low Level Amplifier with RS62 Power Supply and RS106A Echo Control Unit – Band Pass Filter)
- STEED (send tape echo/echo delay)
- Frequency control (varispeed)

### *Monitors*

### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

## Studio

- RLS10 - “White Elephant”
- Vox LS.40 speaker (with four 10” Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier
- S.G. Brown Type “Super K” Headphones

## Microphones

### Vocals

- Neumann U48 or U47/48 (U47/8)

### Electric guitar amplifiers

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

## Superimpositions

- *Here, There and Everywhere* – superimpositions included McCartney on double tracked lead vocals; Harrison on 12-string guitar
- *Got To Get You Into My Life* – superimpositions included Harrison and McCartney on guitars

## Notes

It is assumed that Harrison performed lead guitar additions to both *Here, There and Everywhere* and *Got To Get You Into My Life* in this session.

While Lewisohn only notes the contribution to the latter, the contribution to the former is the only unaccounted for superimposition remaining on the track prior to remix.

Keeping in mind the workman-like approach to sessions during this period, it is likely that the remaining guitar additions to *Here, There and Everywhere* by Harrison were made in the session.

Rodriguez contends that Harrison used his Rickenbacker 360-12 for the *Here, There and Everywhere* guitar superimposition and with that guitar's dual “Rick-O-Sound” outputs, routed the signal to two different guitar amplifiers. Audio evidence does support that the guitar output was routed through a Leslie cabinet, though whether two amplifiers were used cannot be discerned. The phasing heard between the two guitar performances is a natural side effect of double tracking.

**Sources** - Howlett, Keven and Mike Heatley. Pp. 48, 49, 66, 67. / Lewisohn, Mark (1). p. 83. / Rodriguez, Robert. p. 146. / Ryan, Kevin and Brian Kehew. pp. 423, 427. / The Beatles. “*Here, There and Everywhere (take 14)*”. Rec. 17 June 1966. The Beatles. FLAC audio file. / The Beatles. “*Here, There and Everywhere (take 14a)*”. Rec. 17 June 1966. The Beatles. FLAC audio file. / The Beatles. “*Here, There and Everywhere (take 14b)*”. Rec. 17 June 1966. The Beatles. FLAC audio file. / The Beatles. “*Here, There and Everywhere (take 14c)*”. Rec. 17 June 1966. The Beatles. FLAC audio file. / The Beatles. “*Here, There and Everywhere (take 14d)*”. Rec. 17 June 1966. The Beatles. FLAC audio file.

June 21-22, 1966

**Time**

7PM - 345AM

**Studio name and room**

EMI Recording Studios  
Studio 2

**Songs recorded (composer) (activities)**

- *Untitled (She Said She Said)* (Lennon and McCartney)
  - takes 1-3
  - tape reduction of take 3 into take 4
  - superimposition onto take 4

**Songs mixed (version) (remix number and take)**

- *She Said She Said* (mono)
  - remix (RM) 1-3 from take 4

**Studio Personnel**

- Producer: George Martin
- Balance engineer: Geoff Emerick
- Tape operator: Phil McDonald

**Musicians (instruments played)**

- John Lennon (guitar, organ, vocals)
- Paul McCartney (bass (see Notes))
- George Harrison (guitar, bass (see Notes), vocals)
- Ringo Starr (drums)

**Instruments**

**Electric guitars**

*Lennon*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1965 Epiphone ES-230TD, Casino

*Harrison*

- 1961 Fender Stratocaster with synchronized tremolo (Sonic Blue)
- 1964 Gibson SG Standard with Gibson Maestro Lyre Vibrola vibrato
- 1965 Epiphone ES-230TD, Casino with Selmer Bigsby B7 vibrato

**Bass guitars**

*McCartney*

- 1964 Rickenbacker 4001S

*Harrison*

- 1964 Burns Nu-Sonic

**Drums**

*Starr*

- 1964 Ludwig Oyster Black Pearl “Super Classic” (14” X 22” bass drum/ 9” X 13” rack tom/ 16” X 16” floor tom/ 1963 14” X 5.5” “Jazz Festival” snare); Paiste, Zyn, Zildjian cymbals (20” crash/ride; 20” Zyn 4-rivet “sizzle”) Zildjian

cymbals (18” crash/ride; 14” model  
A hi-hats) (Ludwig Set 3)

## Pianos and keyboards

- 1965 Vox Continental 300 Organ

## Amplifiers

## Guitar

*Lennon/Harrison*

- 1966 Fender Showman (Blackface),  
85W head with cabinet, 1X15" JBL  
D130F speaker

*Harrison*

- 1966 JMI Vox UL730, 30W with  
cabinet, with two 12” Vox Celestion  
Alnico Silver T1088 speakers

## Vox Organ

- 1963 JMI Vox AC30/6 Twin Treble  
(Black) with “Top Boost” circuit,  
30W with two 12” Vox Celestion  
Alnico Gray G12 T530 speakers

## Bass

*McCartney/Harrison*

- 1966 JMI Vox UL430 Bass, 30W  
with cabinet, with two 12” Celestion  
G12 speakers

## Recording equipment

*Recording console*

- REDD.51

*Primary tracking machine*

- FOUR-TRACK: 1” Studer J-37

*Mixdown machine*

- MONO: 1/4” EMI BTR2

*Outboard signal processors*

- EMI RS124 Altec Compressor
- EMI RS127 Presence Box
- EMI RS144 4-Way Mixer/Premix
- EMI RS56 Universal Tone Control  
(Curve Bender)
- EMI RS92 Neumann Mic Equaliser
- Fairchild 660 Limiter
- Frequency Control Rack (Vortexion  
S.120 amplifier with Level TG 150M  
oscillator)

*Effects*

- Double tracking
- Echo chamber (includes RS61 Low  
Level Amplifier with RS62 Power  
Supply and RS106A Echo Control  
Unit – Band Pass Filter)
- Frequency control (varispeed)
- STEED (send tape echo/echo  
delay)

## Monitors

### Control room

- Altec 605A (Altec 612 Cabinet) with EMI RS141 Leak TL/25 Plus Amplifier

### Studio

- RLS10 - “White Elephant” Vox LS.40 speaker (with four 10” Elac speakers), with EMI RS141 Leak TL/25 Plus Amplifier S.G. Brown Type "Super K" Headphones

## Microphones

### Vocals

- Neumann U48 or U47/48 (U47/8)

### Electric guitar amplifiers

- Neumann U48, U47/48 (U47/8)
- Neumann U67
- Neumann KM54

### Bass amplifier

- AKG D20

### Drums

- Overhead - AKG D19c
- Bass drum - AKG D20
- Under-snare - Neumann KM56

### Other

- Neumann U48 or U47/48 (U47/8)

## Backing tracks

- *Untitled (She Said She Said)* – backing track included Lennon on guitar; McCartney on bass; Harrison on guitar; Starr on drums

## Superimpositions

- *Untitled (She Said She Said)* – superimpositions included Lennon on double tracked lead vocals; Lennon and Harrison on backing vocals; Lennon on organ; Harrison on guitar

## Notes

McCartney may or may not have played bass on *She Said She Said*. In the Miles book, McCartney recalls that he got in an argument with Lennon and left the session before the bass work was completed. However, EMI Recording Studios documentation indicates the backing track included two guitar parts and a bass part.

It is most likely then that McCartney was the bass player, completing the work before his “blarney” with Lennon, leaving the session and the other three Beatles to complete the night's work.

Howlett confirmed in 2022 that Harrison *did* play bass on the track – though it was in the form of some extra organ notes added after McCartney left the session.

**Sources** - Everett, Walter (2). p. 65. / Howlett, Keven and Mike Heatley. Pp. 52, 53. / Lewisohn, Mark (1). p. 84. / Miles, Barry. p. 288. / Rodriguez, Robert. p. 149.

/ Ryan, Kevin and Brian Kehew. pp. 427, 430. / The Beatles. “*She Said She Said*”. *Revolver*. George Martin, 1966. Vinyl, FLAC audio file.

## November 25, 1966

### Time

Unknown

### Location

London, England  
71/75 New Oxford Street  
London WC1

### Studio name and room

Dick James House

### Songs recorded (composer) (activities)

- *Pantomimes*
  - unnumbered takes
- *Everywhere It's Christmas* (Lennon and McCartney)
  - unnumbered takes

### Studio Personnel

- Producer: George Martin
- Balance engineer: N/A
- Tape operator: Unknown

### Musicians (instruments played)

- John Lennon (vocals)
- Paul McCartney (piano, vocals)
- George Harrison (vocals)
- Ringo Starr (vocals)

### Other Musicians (instruments played)

- Mal Evans (vocals)

### Instruments

### Pianos and keyboards

- Unknown

### Recording equipment

#### *Recording console*

- Unknown

#### *Primary tracking machine*

- Unknown

#### *Outboard signal processors*

- Unknown

#### *Effects*

- Unknown

#### *Monitors*

#### Control room

- Unknown

#### Studio

- Unknown

#### *Microphones*

#### Vocals

- Unknown

## Piano

- Unknown

**Sources** - Lewisohn, Mark (1). p. 88. / The Beatles.

“*Pantomime: Everywhere It's Christmas*”. Rec.25 November  
1966. The Beatles. FLAC audio file.

## ABOUT THE AUTHOR

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