

# Data analysis of Musical and Lyric Traits in the UK's favourite Christmas songs

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## Methodology

We analysed the top 200 UK Spotify song streams from the week of December 25<sup>th</sup> 2016, to identify the songs that people were choosing to play at home over the festive season. Of these 200 songs, 78 were Christmas or Holiday related, and we focused the analyses on these. We chose to work with streams (rather than CD sales or past hit singles charts) because they are most likely to represent the songs that people choose to listen to at home. In the age of CDs people would be more likely to listen to CD albums with a pre-selected compilation of Christmas songs. A streaming-based approach allows us to look at individual songs, and to focus on contemporary, rather than historical, song preferences.

Each song's musical key was noted. For songs that changed key, the key of the chorus was used. Each song's year of release, time signature and beats-per-minute tempos were recorded. The songs were also categorized according to the vocal – Male, Female, M/F duet, Group or instrumental. Finally, the songs were categorized into 9 broad lyric themes. When a song had more than one theme (e.g. a party song featuring a snowman), the main/majority theme was used.

## Findings

These 78 Christmas songs were analysed for their lyric theme, tempo, musical key, vocal, and sleigh bell usage.

Of the top 78 Christmas songs...

- There were 9 broad lyric themes:
  - Home (family, open fires, gifts under the tree, coming home etc)
  - In love (that special someone at Christmas)
  - Lost love (dumped and lonely at Christmas)
  - Party (dancing, mistletoe)
  - Santa (and reindeer)
  - Snow (and snowmen, sleighs, cold winters etc)
  - Religious (nativity story)
  - Peace on earth
  - Instrumental (no lyrics)
- 38 (49%) featured sleigh bells.
- 10 songs (13%) were by Michael Bublé.
- Some of the most commonly occurring words were snow, party, tree, Santa, love, home, and cold.
- 95% of the songs were in a major key; 90% were in 4/4 time (of which 55% had a regular straight 4 beat, and 35% had a swing beat).
- 68% of the songs had a male vocal; 24% had a female vocal; the remainder were instrumentals or group vocals.

## Commentary

Surprisingly, the 2016-17 streaming list is more ‘Christmassy’ than the more common Christmas number 1 list, which, since the X Factor and similar TV shows from the early 2000s, has been dominated by these reality show winners. This suggests that listeners really want Christmas music in their homes on the big day.

Given our tendency to feel nostalgic during the festive season, it’s less surprising that people like oldies. Bing Crosby’s *White Christmas* (1942) and Eartha Kitt’s *Santa Baby* (1953) both made the top 20, and Mel Tormé’s *The Christmas song* (1945) made the top 40.

But contemporary music fans often like to hear contemporary-quality recordings, so many listeners go for older songs performed by newer artists. Some classics appear several times in the top 78, including 3 versions of 1942’s *Baby It’s Cold Outside* (Idina Menzel with Michael Bublé, Ella Fitzgerald, and the Cast of Glee), and 1953’s *Santa Baby* (cover versions by Eartha Kitt, Kylie Minogue and, of course, Michael Bublé).

### **The Bublé effect**

The 10 Michael Bublé songs were: *It’s Beginning To Look A Lot Like Christmas*, *Holly Jolly Christmas*, *All I Want For Christmas Is You*, *White Christmas (Duet With Shania Twain)*, *Cold December Night*, *Santa Claus Is Coming To Town*, *Jingle Bells (feat. The Puppini Sisters)*, *Christmas (Baby Please Come Home)*, *Have Yourself A Merry Little Christmas* and *Santa Baby*. Of the 78 songs in our analysis, he appears 10 times (13% of the dataset). All of these recordings are from his 2011 album entitled simply ‘Christmas’.

So, how does Mr Bublé do it? Perhaps he is the perfect yuletide artist for families (who usually span several generations of music lovers); he uses classic big band arrangements, evoking the much-loved Frank Sinatra era of the 1940s/50s; he sings classic songs that everyone knows (no ‘difficult new material’ here); and despite being a strong singer, he famously [uses Autotune on his voice](#), giving the recordings a contemporary radio-friendly quality (at least for 2011).

<http://www.npr.org/2013/04/28/179267628/michael-bubl-on-fishing-sinatra-and-auto-tune>

### **The ultimate Christmas song?**

The research suggests that an ‘ultimate’ Christmas song might have the following characteristics:

- Major key (C major or A major)
- 4/4 time, or 4/4 swing time
- A lyric theme relating to Santa, snow, home/family or being in love (at Christmas)
- Sleigh bells playing 8 to the bar in the chorus
- Tempo of approximately 115 beats per minute (the median average tempo)
- Michael Bublé singing

An honorable mention must go to Slade’s *Merry Xmas Everybody* (1973) which always does remarkably well in Christmas song polls, and covers most of the elements shown above, albeit without that post-2011 Bublé boost. Would a Noddy Holder/Michael Bublé collaboration become the most successful Christmas song ever? We may never know.

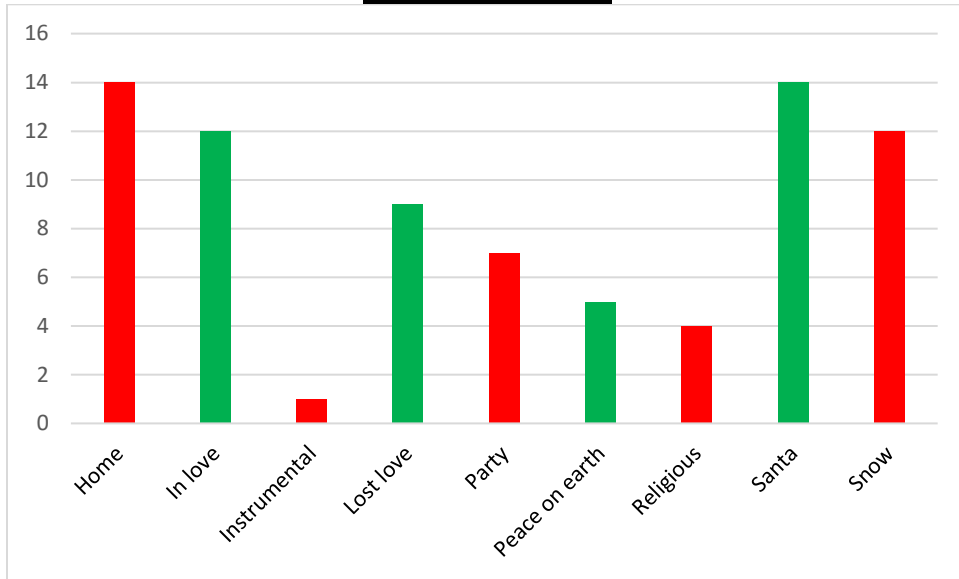
## **Top 78 Christmas song streams of 2016**

<b>Number</b>	<b>Title</b>	<b>Artist</b>	<b>Tempo (BPM)</b>	<b>Year</b>
1	All I Want for Christmas Is You	Mariah Carey	150	1994
2	Last Christmas	Wham!	108	1986
3	Fairytale of New York (feat. Kirsty MacColl)	The Pogues	119	1987
4	Merry Christmas Everyone	Shakin' Stevens	102	1991
5	It's the Most Wonderful Time of the Year	Andy Williams	202	1963
6	Do They Know It's Christmas?	Band Aid	115	1984
7	It's Beginning To Look A Lot Like Christmas	Michael Bublé	93	2011
8	I Wish It Could Be Christmas Everyday	Wizzard	140	1973
9	Step Into Christmas	Elton John	141	1974
10	Wonderful Christmastime	Paul McCartney	95	1980
11	Merry Xmas Everybody	Slade	122	1973
12	White Christmas	Bing Crosby	96	1942
13	Rockin' Around The Christmas Tree	Brenda Lee	141	1960
14	Happy Xmas (War Is Over)	John Lennon	147	1972
15	Mary's Boy Child / Oh My Lord	Boney M.	113	1981
16	When Christmas Comes Around	Matt Terry	146	2016
17	Jingle Bell Rock	Bobby Helms	119	1957
18	Santa Baby	Eartha Kitt	84	1953
19	Sleigh Ride	Phil Spector	92	1963
20	Lonely This Christmas	Mud	99	1974
21	Stop the Cavalry	Jona Lewie	98	1980
22	Christmas (Baby Please Come Home)	Darlene Love	126	1963
23	Feliz Navidad	José Feliciano	149	1970
24	2000 Miles	Pretenders	66	1983
25	Blue Christmas	Elvis Presley	95	1957
26	Let It Snow! Let It Snow! Let It Snow!	Frank Sinatra	143	1960
27	I Believe in Father Christmas	Greg Lake	113	1975
28	The Christmas Song (Merry Christmas To You)	Nat King Cole	132	1960
29	Santa Baby	Kylie Minogue	87	2010
30	Christmas Lights - Live From Spotify London	Coldplay	132	2010
31	Carol of the Bells	Mykola Dmytrovych Leontovych	141	1914
32	Santa Claus Is Comin' to Town	Bruce Springsteen	140	1985
33	Underneath the Tree	Kelly Clarkson	160	2013
34	Have Yourself A Merry Little Christmas	Sam Smith	146	2014
35	Santa Tell Me	Ariana Grande	96	2014
36	Holly Jolly Christmas	Michael Bublé	151	2011
37	Mistletoe	Justin Bieber	162	2011
38	All I Want For Christmas Is You	Michael Bublé	142	2011
39	The Christmas Song	Mel Tormé	84	1945
40	White Christmas (duet with Shania Twain)	Michael Bublé	63	2011
41	When a Child Is Born (Soleado)	Gladys Knight & The Pips feat Johnny Mathis	128	1975

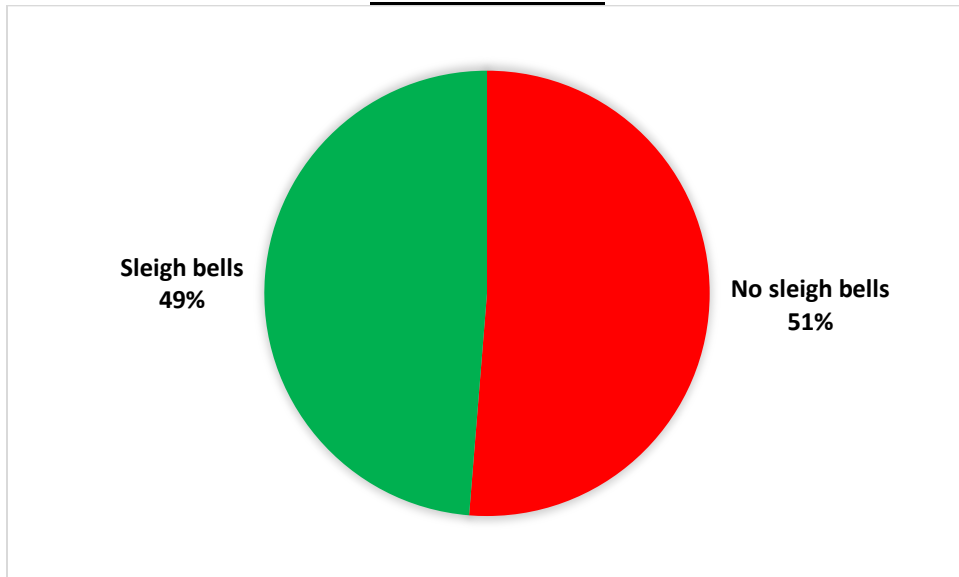
42	It's Beginning to Look a Lot Like Christmas	Perry Como	113	1951
43	8 Days of Christmas	Destiny's Child	100	2001
44	Little Saint Nick	The Beach Boys	131	1963
45	Cold December Night	Michael Bublé	84	2011
46	Santa Claus Is Coming To Town	Michael Bublé	122	2011
47	Run Rudolph Run - Single Version	Chuck Berry	152	1958
48	Baby It's Cold Outside (with Michael Bublé)	Idina Menzel	113	2014
49	Frosty the Snowman	The Ronettes	144	1972
50	In Dulce Jubilo	Mike Oldfield	120	1975
51	Jingle Bells (feat. The Puppini Sisters)	Michael Bublé	123	2011
52	Jingle Bell Rock from Daryl	Daryl Hall & John Oates	129	1983
53	Christmas Lights	Coldplay	132	2010
54	Christmas (Baby Please Come Home)	Michael Bublé	126	2011
55	Walking In The Air	Aled Jones	99	1985
56	Mistletoe and Wine	Cliff Richard	135	1988
57	Let It Snow! Let It Snow! Let It Snow!	Dean Martin	134	1959
58	Have Yourself a Merry Little Christmas	Christina Aguilera	69	2000
59	One More Sleep	Leona Lewis	113	2013
60	Santa Claus Is Coming To Town	The Jackson 5	147	1970
61	Have Yourself A Merry Little Christmas	Frank Sinatra	92	1999
62	Happy Xmas (War Is Over)	Céline Dion	86	1998
63	Have Yourself A Merry Little Christmas	Michael Bublé	69	2011
64	Baby It's Cold Outside	Ella Fitzgerald	113	1949
65	A Spaceman Came Travelling	Chris de Burgh	95	1975
66	Here Comes Santa Claus	Phil Spector	163	1963
67	Winter Wonderland	Tony Bennett	116	1968
68	Christmas Wrapping	The Waitresses	116	1981
69	Santa Baby	Michael Bublé	76	2011
70	Deck The Halls	Nat King Cole	107	1960
71	Baby, It's Cold Outside	Glee Cast	111	2010
72	Christmas Day	Dido	81	2000
73	I Saw Mommy Kissing Santa Claus	The Jackson 5	129	1970
74	Please Come Home for Christmas	Luther Vandross	100	1995
75	Christmas in Hollis	Run D.M.C.	95	1987
76	Christmas Time (Don't Let The Bells End)	The Darkness	83	2003
77	Rudolph the Red Nosed Reindeer	John Denver	89	1975
78	This Christmas	Donny Hathaway	93	1970

# Data charts

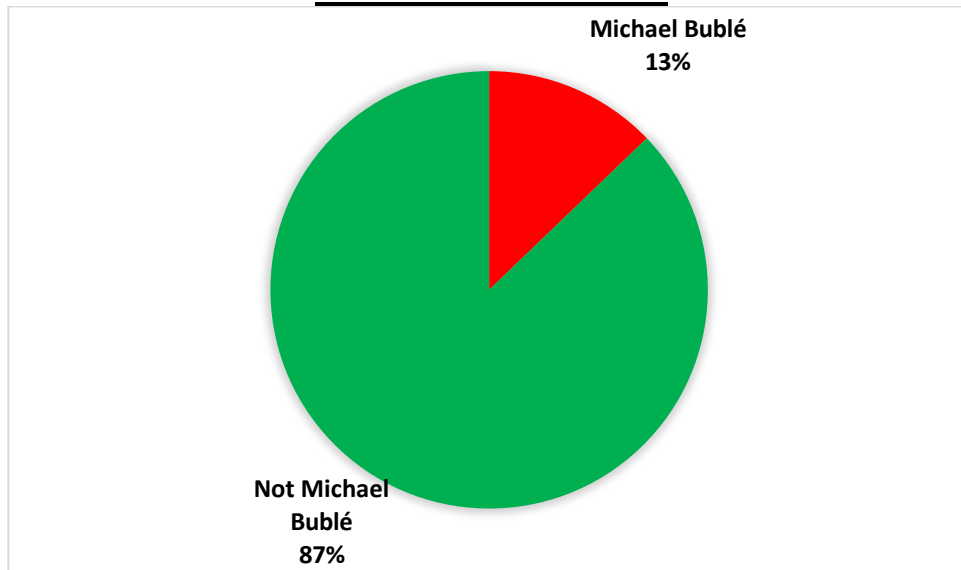
## LYRIC THEMES



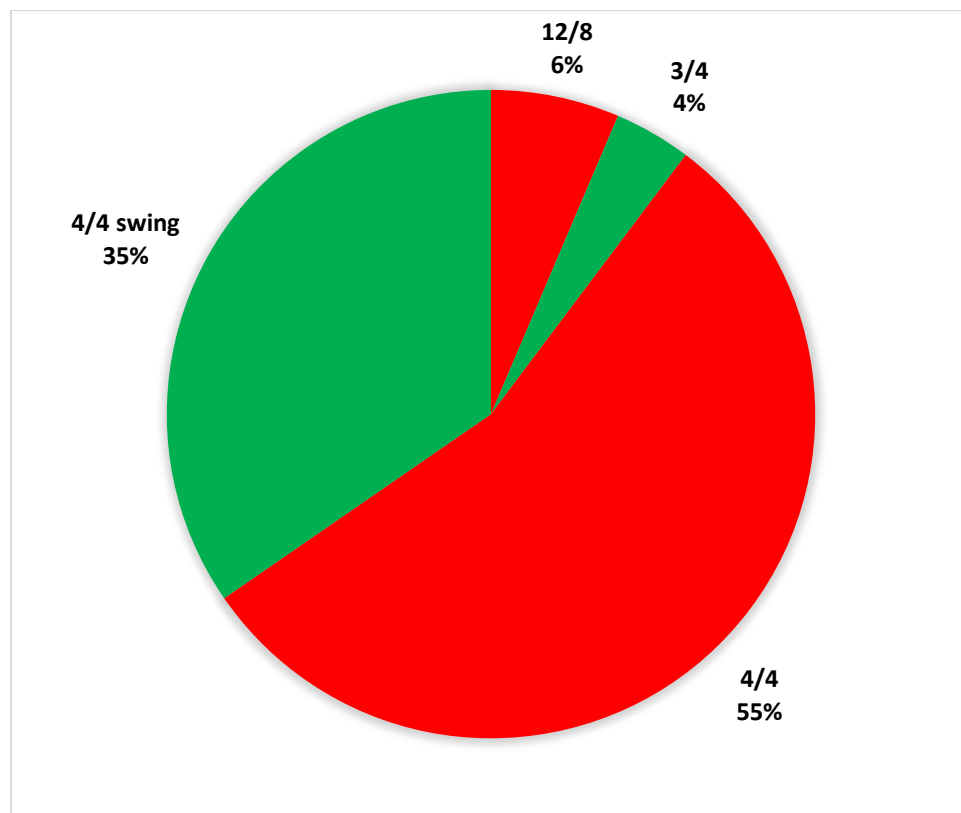
## SLEIGH BELLS



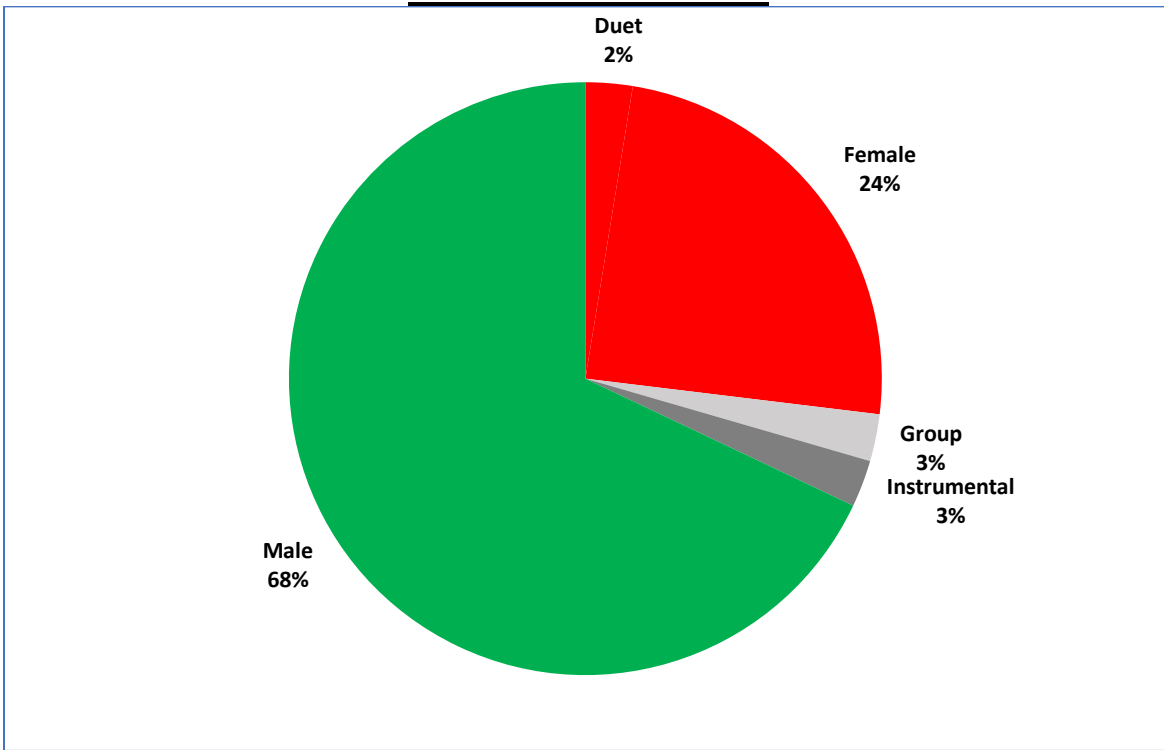
## BUBLÉ DISTRIBUTION



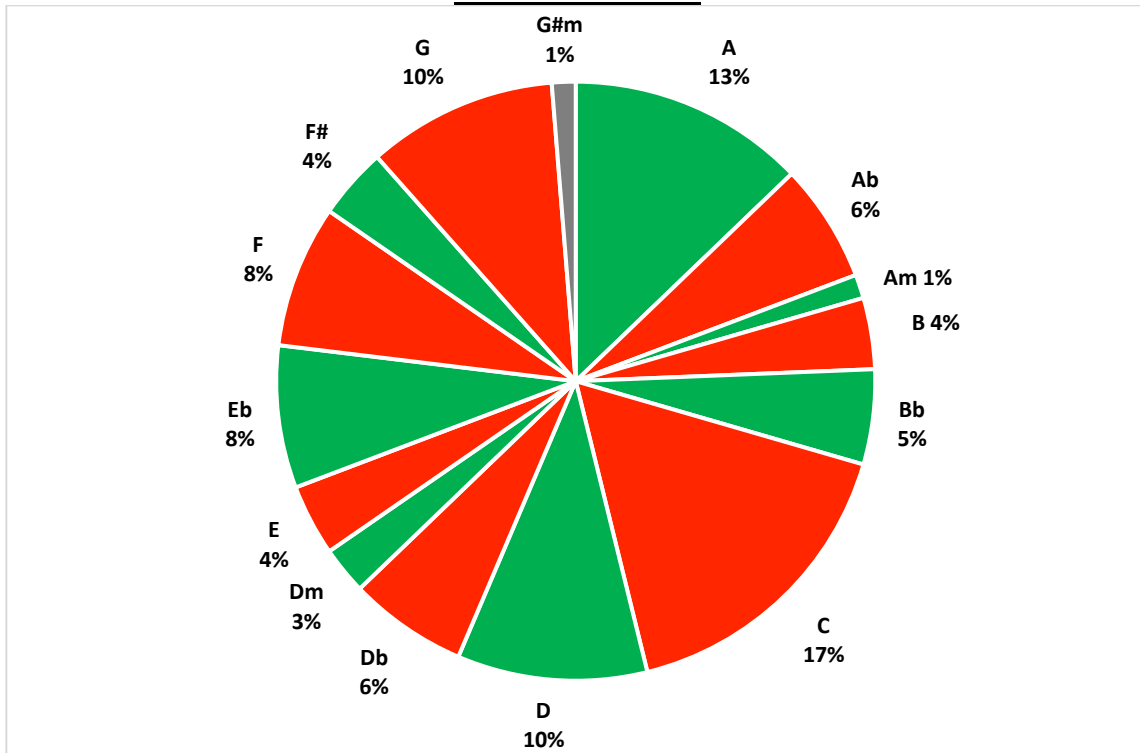
## TIME SIGNATURES



## VOCAL DISTRIBUTION



## MUSICAL KEYS



**YEAR OF RELEASE / NUMBER OF STREAMS**

