b) To create activity on 29MHz before someone moves in because of lack of operation on the band.

c) To find a use of discarded CB sets now that new reforms are being introduced more stringently.

With minor variation the above techniques have been applied to SSB rigs in an effort to simulate mobile activity on 10 metre SSB.

Many CB aerials can be retuned to 28-29MHz with little difficulty and a host of reasonable test gear at very cheap prices is also available.

To date some 2 — 3000 conversions to 27MHz FM have been made to a variety of sets and basically the same technique applies to 29MHz.

## Appendix 4

## Binary Arithmetic

Binary arithmetic is an arrangement of numbers in ascending powers of two.

The standard arrangement is as shown in the table across the page (below).

Power of 2	0	1	2	3	4	5	6	7	8	9	10	11	12	2 <sup>n</sup>
Binary No.	1	2	4	8	16	32	64	128	256	512	1024	2028	4056	Code sum
Sample	0	1	0	1	1	1	0	0	1	1	0	0	0	826

## Appendix 1

MC 145106 MM 55106 MM 55116

MM 55126 MM 55108

SM 5118

SM 5107

MC 14568

MC 14526

MC 145109

PLL02A/AG

SM 5109

TC 9100P

MSM 5807

MSM 5907

**PLLO1A** 

PLLO3Ā REC 86345 TC 5080P

TC 9102P

TC 9103P PLL08A

MDC 40013 NIS 7261A NIS 7264B

MC 145107 MM 55107

Codes	Used in	Variou	s P.L.L.	Devices		
Binary Inputs	Binary in Internal	BCD in BCD	Decemen	Random		
mputs	ROM	Code Convertor	Programme Inputs	Code		
CC 13001 CC 13002 LC 7113 MC 58472* MC 58473P MB 8719 MB 8734 MC 145104 MM 55104	LC 7110	LC 7120 UPD 861C UPD 2810C UPD 2812C UPD 2814C UPD 2816C LC7137	LC 7130 MSC 42502P UPD 858C LC 7131 LC 7135	TC 9106P TC 9109P		
MM 55114 MM 55124 MN 6040 A SM 5104		Require Synthesiser Replacement		Require Synthesiser Replacement		

As can be seen if each level could be selected and shown as being used by indicating as 1 whereas unused lines were indicated as 0 then any number between 0 and 8111\* could be shown by using the above sequence. A typical arrangement showing a count of 826 is shown, ie the sum total of 512, 256, 32, 16, 8 and 2.

\*8111 = sum of all values shown from 4056-1.

This system is known as straight binary. One other form is used in the systems discussed in the article ie. Binary Coded decimal or BCD. In this case only symbols up to  $2^3$  are used as number indicators, either two or three additional channels are used as decimal point indicators, and multipliers.

