

Re: figuring out a checksum method

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- *From:* Chris W <1qazse4@xxxxxxx>
 - *Date:* Tue, 24 Jan 2006 12:32:38 -0600
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Ben Luden wrote:

"Chris W" <1qazse4@xxxxxxx> wrote in message
[news:oEtBf.2610\\$2o5.1766@xxxxxxxxxxxxxxxxxxx](news:oEtBf.2610$2o5.1766@xxxxxxxxxxxxxxxxxxx)

I was wondering if anyone here is familiar enough with checksums to figure out what the method used is if I give you several valid sequences. Here they are and I can find more if you need them.

```
1Z 438 006 03 4684 693 5
1Z 438 006 03 4684 694 4
1Z 438 006 03 4684 695 3
1Z 438 006 03 4684 696 2
1Z 438 006 03 4684 697 1
1Z 438 006 03 4684 698 0
1Z 438 006 03 4684 699 9
```

The numbers are all the same except for last two digits. (not enough variation to be really confident)
last two digits always add to 8 (discard the 1 from 18 for the last one)
They could be going for a 9. (sum across numbers always ends in 9)
But most checksums are in binary and use "exclusive or", not addition, but who knows, its the post office.
Most likely it is published on the web somewhere.

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I went through more numbers and I think I found a pattern, add 9 until you get to a number that ends in 9x then look at the last number that ends in 0y and the next number will be $1(y-2)$ and y will be come $y-2$ for the next time you get to a 9x. Here are the numbers that I have found. You can test this by going to the UPS website and just trying out numbers.

```
1Z 438 006 03 4684 693 5
1Z 438 006 03 4684 694 4
1Z 438 006 03 4684 695 3
1Z 438 006 03 4684 696 2
1Z 438 006 03 4684 697 1
1Z 438 006 03 4684 698 0
1Z 438 006 03 4684 699 9
1Z 438 006 03 4684 700 5
1Z 438 006 03 4684 701 4
1Z 438 006 03 4684 702 3
1Z 438 006 03 4684 703 2
1Z 438 006 03 4684 704 1
1Z 438 006 03 4684 705 0
1Z 438 006 03 4684 706 9
1Z 438 006 03 4684 707 8
1Z 438 006 03 4684 708 7
1Z 438 006 03 4684 709 6
1Z 438 006 03 4684 710 3
1Z 438 006 03 4684 711 2
1Z 438 006 03 4684 712 1
1Z 438 006 03 4684 713 0
1Z 438 006 03 4684 714 9
1Z 438 006 03 4684 715 8
1Z 438 006 03 4684 716 7
1Z 438 006 03 4684 717 6
1Z 438 006 03 4684 718 5
1Z 438 006 03 4684 719 4
1Z 438 006 03 4684 720 1
1Z 438 006 03 4684 721 0
1Z 438 006 03 4684 722 9
1Z 438 006 03 4684 723 8
1Z 438 006 03 4684 724 7
1Z 438 006 03 4684 725 6
1Z 438 006 03 4684 726 5
1Z 438 006 03 4684 727 4
1Z 438 006 03 4684 728 3
1Z 438 006 03 4684 729 2
1Z 438 006 03 4684 730 9
1Z 438 006 03 4684 731 8
1Z 438 006 03 4684 732 7
1Z 438 006 03 4684 733 6
1Z 438 006 03 4684 734 5
1Z 438 006 03 4684 735 4
1Z 438 006 03 4684 736 3
1Z 438 006 03 4684 737 2
1Z 438 006 03 4684 738 1
1Z 438 006 03 4684 739 0
1Z 438 006 03 4684 740 7
```

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Chris W
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