

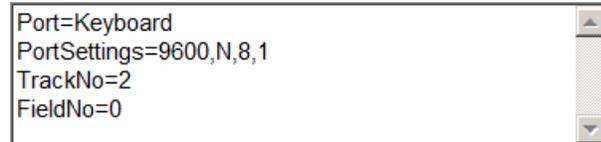


GoPrint MagSwipe Card Masking Overview

The GoPrint MagSwipe reader produces a default mask that reads the entire digits of a Track 2 card. This is determined by the Field Number.

Default Setting:

Port=Keyboard
PortSettings=9600,N,8,1
TrackNo=2
FieldNo=0



Symbols such as the question mark (?), semi-colon, (;), and percent sign (%) represent the beginning and ending of a track and are referred to as Beginning and Ending sentinels. It tells the swipe where to start and stop.

Note: the percent sign is generally used with Track 1 formatting.

More complex tracks include a Separator character represented by the equal sign (=). This symbol is used to divide the track into sections, with one containing the actual account ID and the other half pertaining to some other campus information.

If you can learn to grasp these 3 punctuation symbols; (?), (;),(=) you can easily master various configurations.

Example 1 - Simple Extraction

Typically NuVision and Student ID cards provide a simple track 2 Field 0 programmed card containing only the students actual account number or ID number. No other digits exist.

Here you can see we detect the card swipe and read all the digits between the colon (;) and question mark (?). This is the default function of Field=0 mask. That is, to read ALL digits between the beginning and ending sentinels; no other masking needs to be attempted.

Detected possible card swipe ;00012341100?

(Run.log) Parsed card swipe data ';00012341100?' using track 2 field 0 and found 00012341100



Example 2- Average Extraction using Equal Sign

Here you can see the default Goprint MagSwipe settings read the entire contents of the track and is represented by FieldNo=0

Detected possible card swipe '%0003026137?;000102945=0891?+0003026137?'

Default Settings

Port=Keyboard
PortSettings=9600,N,8,1
TrackNo=2
FieldNo=0

The actual account ID we want to extract is 000102945 and is represented by the digits between the semi-colon (;) and equal sign (=). As you recall, the equal sign is used to divide various components of a card.

To extract the account ID, we need to stripe the first 9 characters to the right of the semi-colon up to the equal sign. To do so, you can simply change the FieldNo=0 to FieldNo=1. FieldNo=1 tells GoPrint to read ALL characters between the semi-colon and up to the equal sign: ignoring all other character before and after.

Port=Keyboard
PortSettings=9600,N,8,1
TrackNo=2
FieldNo=1

Example 3 - Advanced - Regular Expression Mask

Detected possible card swipe '?;6017960018009863=99121010000000000000?'

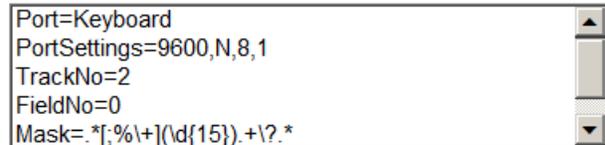
Here we have a much more complicated scenario where the actual account ID is represented by the first 15 digits or 601796001800986.

It's important to note, that although the number 3 falls between the question mark, semi colon, and equal sign it's **NOT** part of the account ID and must also be stripped.



To extract the first 15 digits, a custom 'Mask' must be used so we can stripe the 3. It looks something like this:

```
Port=Keyboard
PortSettings=9600,N,8,1
TrackNo=2
FieldNo=0
Mask=.*[;%\+](\d{15}).+\?.*
```



The end results in a debug Remote.log detects:

```
Detected possible card swipe '?;6017960018009863=99121010000000000000?'
Parsed card swipe data '?;6017960018009863=99121010000000000000?' using mask
and found '601796001800986'
```

What does all this mean?

A Mask is composed of a group of Regular Expressions and breaking it down can be somewhat complicated.

- The .* at the end means the same as the one at the front. Breaking the Mask above down into what it's doing, from left to right.
- The .* means match zero or more of any character, which allows for junk coming in like double-swipes or a bad swipe.
- The [;%\+] means match on a semi-colon, percent, or plus sign character, which are the starting characters of a card swipe and indicative of what track's data was found. Plus (+) is a special character in regular expressions, as are dot (.), asterisk (*), question mark (?), and backslash (\), so they must be prefixed with a backslash (\).
- The (\d{15}) means match 15 digits.

It is also the parenthesized portion of the mask, so it is the portion that will be extracted. The results extract only the first 15 characters and ignore any characters thereafter, (including the 3 which is the 16th character) up to the equal sign.



- The .+ means match one or more of any character.
- The \? means match a question mark character, which is the ending character of any card swipe.

Additional Info: additional instructions are available under the PayStation Help section.

Tip: The thing to remember here is to confirm in advance with the client the actual account ID, (open Notepad and swipe the card to view its contents).

Note: a Custom Mask overrides any FieldNo entry.

Important: when changing the Mask you need to restart the print release station java process for it to take effect.

Example from a Dell Carder Reader

It's interesting to observe how other magswipe readers may detect additional information from the same card swipe.

Detected possible card swipe

```
'%B6017960018009863^SUMMER/PROGRAMS^991210100000911800986 000  
?;6017960018009863=99121010000000000000?'
```

Parsed card swipe data

```
'%B6017960018009863^FALL/PROGRAMS^991210100000911800986 000  
?;6017960018009863=11210100000000000000?' using mask and found  
'601796001800986'
```