TECHNICAL SPECIFICATION
EasyPay Number for Bill Payment
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CHANGE HISTORY

Version:	1.0	**Date:**	6 July 2011	**Author:**	Ron Tuffin
Change:	Initial Release: This release is largely based on the html document that has been used up until this point (the last 13 years).				
Version:	1.1	**Date:**	30 Sept 2014	**Author:**	Ron Tuffin
Change:	Added section 2.4 dealing with representing the EasyPay number as a barcode				
Version:	1.2	**Date:**	23 October 2014	**Author:**	Chris Brummer
Change:	Added additional detail and references for the Barcode				

Document approval			
Name	**Position**	**Date**	**Signature**
Chris Brummer	Development Manager		
Ron Tuffin	Development Team Manager and Author		

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1. INTRODUCTION

1.1 Purpose

The purpose of this document is to describe the layout and content of an EasyPay number.

1.2 Scope

The EasyPay number is a method in which Receivers can identify bills for collection at Bill Payment enabled POS devises or Collectors. Definitions, Acronyms and Abbreviations

Term	Definition
BPS	Bill Payment Server
Collector	The retail agent that accepts a bill payment on behalf of a Receiver and forwards the payment details to EasyPay
Customer	The bill payer (the public)
FFR File	A file containing configuration data for each Collector
Payment	The financial transaction value to be credited to a particular receiver's account
POS	Point-of-sale or point-of-service
Receiver	The issuer of a bill or account for which payment is required (e.g., a utility company)
Tender	The method of payment presented for the transaction, e.g., cash, cheque card or credit card
Barcode	A machine-readable code in the form of patterns of parallel lines and of varying widths. The specification used for encoding an EasyPay number into a barcode is the **Code 128C (Code set C)** barcode

1.3 References

This specification makes reference to the following documents.

Document Number	Title
	GS1_general Specifications

1.4 Overview

In order for a bill payment to be processed from a Collector to a Receiver, the receiver needs to furnish the bill with an account number that is recognised at the POS , the BPS and finally by themselves the receiver. This number should be adequate to identify the specific receiver account (or other applicable payment). The EasyPay number is one such number format. The Receiver could for example, encode their own proprietary account number into an EasyPay number. This generated EasyPay number is printed on a bill or distributed to the Customer in various different forms. On presentment at the POS this number is captured manually or scanned and transmitted to EasyPay along with the amount to be paid and the tender type received.

EasyPay would then process this payment and forward the payment details to the receiver whom in turn will credit the correct account based on the information stored within the EasyPay number.

2. THE EASYPAY NUMBER

2.1 Structure of an EasyPay number

An EasyPay number will have the following structure:

9{rrrr}{aa...a}{c}

Where:

- 9 is the Easy Pay number prefix – all EasyPay numbers MUST begin with a 9
- {rrrr} is the unique 4-digit Receiver Identifier assigned by EasyPay
- {aa...a} is a variable length 1 to 14-digit Receiver account reference
- {c} is the Modulus 10 Luhn Check Digit

Additional rules and guidelines

- An EasyPay number may contain numeric digits only.
- Account numbers may range from 1 to14 digits, therefore the total length of an EasyPay number may range from 7 to 20.
- However, for each Receiver Identifier, the account length *must* be fixed - ie. if an account length of 10 is used for Receiver 1234, then all EasyPay numbers starting with 91234.... *must* use 10 digits for the account - padding with 0's if necessary

2.2 The check digit (Luhn Modulus 10)

The check digit is calculated on the Receiver Identifier {rrrr} and the Account Number {aa...a} – the leading 9 is *not* included.

- Starting from the last digit to the first, double each digit in an odd numbered position and subtract 9 if the product is larger than 9.
- Add up all the even-numbered digits and all the previous products.
- The check digit will be the number needed to make the sum a multiple of 10.

2.2.1 Examples of the check digit calculation

1) Receiver Identifier = **6789**, Account number = **25433678212333**

```
678925433678212333
| | | | | | | | |
658921463377222636 ==Add==> 82 ==> Check digit will be 90-82 ==> 8
```

EasyPay number: **96789254336782123338**

2) Receiver Identifier = **1500**, Account number = **123456789**

```
1500123456789
| | | | | | |
2500226416589 ==Add==> 50 ==> Check digit will be 50-50 ==> 0
```

EasyPay number: **915001234567890**

2.3 Displaying the EasyPay Number as a number

These guidelines for displaying the EasyPay Number help the cashier to locate and accurately capture the EasyPay number when presented with a bill for payment.

- The EasyPay Number should be displayed in a prominent position of the bill. We recommend at the bottom of the page.
- The EasyPay Number should be proceeded by a number of 'chevrons' or greater than signs: >>>>>>
- The EasyPay number should be formatted in such a way as to display the number in groups of 3 or 4 digits.

For example:

>>>>>> 9678 9254 3367 8212 3338

Or

>>>>>> 915 001 234 567 890

2.4 Displaying the EasyPay Number as a barcode

The barcode standard to be used when encoding an Easypay Number is the **Code 128C** (Code set C) barcode.

The full EasyPay Number must be encoded in the barcode.

The barcode examples below depict the above EasyPay numbers as they should appear on the bill when encoded following the Code128c barcode specification.

Or

Barcode Guidelines:

- The minimum quality of the Barcode should be 200 DPI when printed to ensure scanners can detect the barcode.
- The minimum symbol height of the Code 128 barcode is 31,75mm
- For additional information on barcode standards, refer to:
    - The **GS1 General Specifications for barcode V14, Jan – 2014** which can be downloaded from http://www.gs1.org/genspecs
    - The consumer goods council of South Africa: https://www.cgcsa.co.za/cgcsa