



# *Express Checkout for Payflow Pro*

Express Checkout for Payflow Pro

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# Preface

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## Intended Audience

This guide assumes that its readers:

- z Are experienced web or application developers
- z Have a background in payments services
- z Are developing payment services applications that are integrating Express Checkout to process transactions to be sent over the Payflow gateway

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## Related Documentation

For additional information on Payflow documentation and the Payflow SDK, go to <http://www.paypal.com/developer>, select **Documentation** from the **Library** tab, and click the Payflow Pro link.

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## How to Contact Customer Support

For problems with transaction processing or your connection to the server, contact Customer Support by opening a ticket on the under Contact Support tab at <http://www.paypal.com/mts>.

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## Document History

**TABLE 3.1 Document history**

Date	Description
October 2009	Updated currency codes.

**TABLE 3.1 Document history**

Date	Description
August 2009	Revised and updated. Added reference transactions and RecurringPayments billing type. Revised billing agreements. Removed PayPal Button Placement. Added “Eliminating Your Order Review Page” to <a href="#">Chapter 1, “Express Checkout Processing Flow.”</a>
June 2009	Added SHIPTONAME parameter.
May 2009	Updated to correct for technical inaccuracies.
April 2009	Added creating billing agreements for setting up Recurring Payments through Express Checkout. Added order line-item details parameters. Updated with PHONENUM parameter in Set Express Checkout request.

# 1

## Express Checkout Processing Flow

This chapter describes Express Checkout processing:

- z [“What Is Express Checkout?”](#) on page 9
- z [“How Express Checkout Works”](#) on page 9
- z [“Express Checkout Flow”](#) on page 11
- z [“Express Checkout Sale Transaction Example”](#) on page 12
- z [“Other Express Checkout Concepts”](#) on page 16

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### What Is Express Checkout?

Express Checkout is PayPal’s method of payment. It offers your buyers an easy, convenient checkout experience by letting them use shipping and billing information stored securely at PayPal to check out, so they don’t have to re-enter it on your website.

Like other Payflow transactions, Express Checkout transaction requests send data as name-value pair parameters, and include this basic set of required parameters:

- z Connection parameters
- z User parameters
- z Transaction type (TRXTYPE) such as Sale (TRXTYPE=S), Authorization (TRXTYPE=A), or Order (TRXTYPE=0)
- z Tender type, which is always PayPal (TENDER=P)

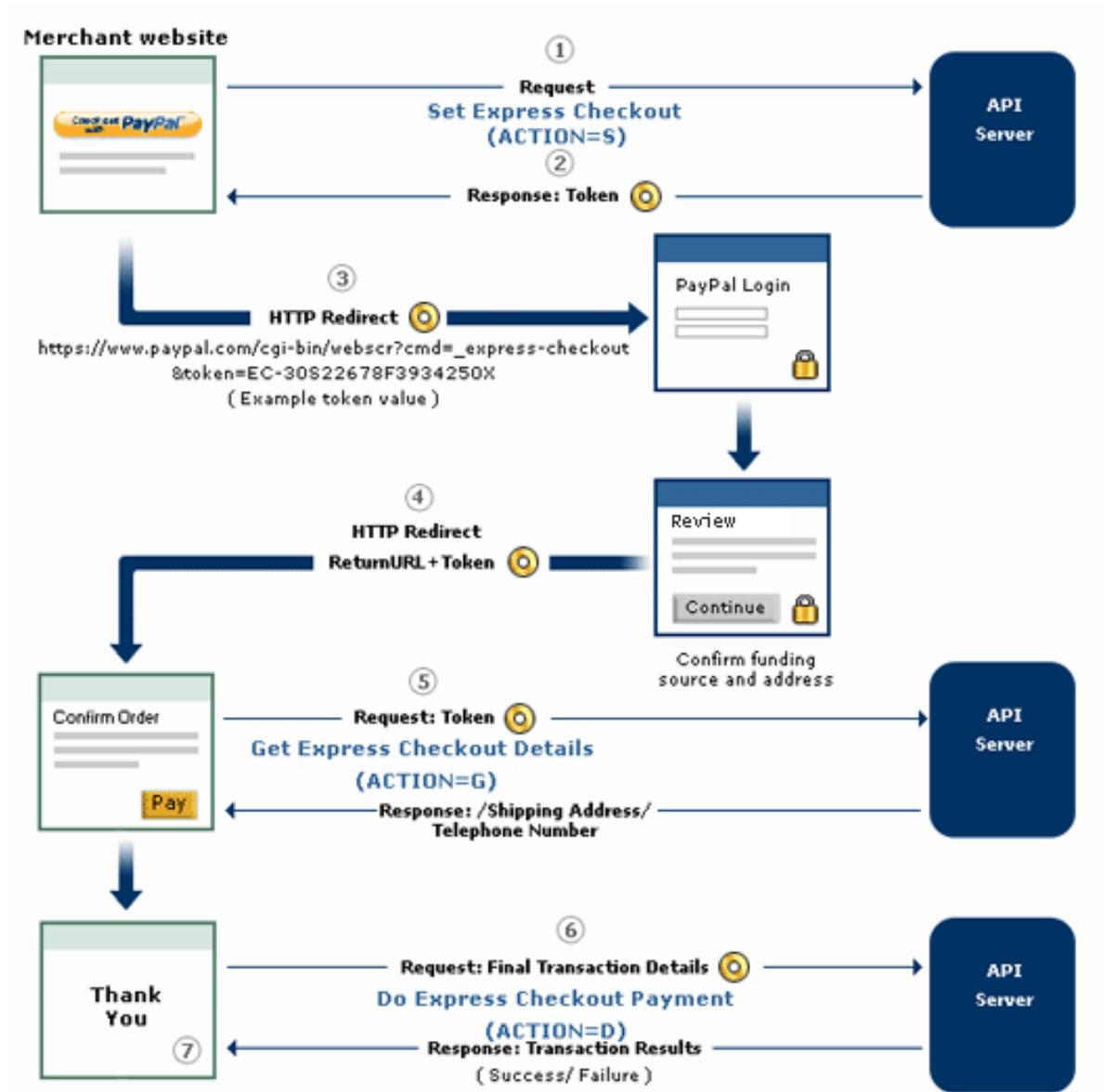
---

### How Express Checkout Works

The figure below summarizes the Express Checkout flow.



FIGURE 1.1 Express Checkout flow



The figure shows a typical set of web pages representing a merchant's website. (The web page layout may differ somewhat from your own web design.) The buyer uses the PayPal logo to choose PayPal as their method of payment. Express Checkout gives you the flexibility to place the PayPal logo at two points in the checkout flow:

- z On your Shopping Cart page at the start of checkout, as shown
- z On your Payment Methods page with other billing options

The numbered callouts in the figure correspond to the numbered events described below.

1. On your website, your buyer checks out either by clicking the **Check out with PayPal** button from your Shopping Cart page (as shown in the figure layout) or by selecting PayPal from your Payment Methods page. This buyer action triggers the call to the Set Express Checkout request.
2. The server responds to the request by returning a *token* or string value to your website. In the figure above, the token is represented by an orange “donut.” The token keeps track of your buyer throughout the checkout process.
3. You direct your buyer to the PayPal site, where they log in, select a funding source, and confirm contact and shipping information. Express Checkout includes parameters that you can use to customize the PayPal pages so they match characteristics of your own website. For example, you can provide your own logo and colors.
4. When your buyer clicks the **Continue** button, PayPal sends the buyer back to your site at the return URL you specified in the Set Express Checkout request. The token is appended to the URL to identify the buyer.
5. Optionally you can send the Get Express Checkout Details request to obtain details about your buyer such as the buyer’s telephone number and shipping address. You send the token to identify the buyer. The server returns the requested information.
6. When your buyer clicks the **Pay** button, you send the Do Express Checkout Payment request to perform the actual payment transaction.
7. The server returns the transaction result.

---

## Express Checkout Flow

Through a set of name-value pair parameters, you provide Express Checkout transaction data to the server. The server responds with `RESULT` and `RESPMSG` values, along with other response parameter data about the transaction.

Unlike most Payflow Pro transactions, which consist of a single request call, Express Checkout is a three-step process where the second step is optional:

1. Set Express Checkout sets up the data about the transaction and controls what is displayed to the buyer on the PayPal site when the buyer chooses PayPal at checkout.
2. Get Express Checkout Details is an optional request enabling you to obtain information about the transaction for display on your own website.
3. Do Express Checkout Payment performs the actual money transfer.

This guide refers to this request sequence and the resulting buyer experience as the *Express Checkout flow*.

## Express Checkout ACTION Values

To identify each request in the Express Checkout flow, you pass the appropriate `ACTION` parameter. The table below shows the value of `ACTION` for each Express Checkout request.

**TABLE 1.1 ACTION values for Express Checkout**

Request	ACTION value
Set Express Checkout	<code>ACTION=S</code>
Get Express Checkout Details	<code>ACTION=G</code>
Do Express Checkout Payment	<code>ACTION=D</code>

## Express Checkout Token

The `TOKEN` value returned in the response to Set Express Checkout associates the buyer with this particular Express Checkout flow. You pass it back to the server in these Express Checkout requests:

- z In the HTTP request to redirect the buyer's browser to the PayPal web site
- z In the Get Express Checkout Details request to obtain the buyer's shipping information
- z In the Do Express Checkout Payment request to carry out the transaction

## Express Checkout Sale Transaction Example

This section describes the Express Checkout flow in greater detail using a Sale transaction as the example. See [Appendix A, "Express Checkout Parameter Reference,"](#) for detailed descriptions of all required and optional Express Checkout transaction parameters.

- z [Set Express Checkout \(ACTION=S\)](#)
- z [Redirecting the Buyer to PayPal](#)
- z [Get Express Checkout Details \(ACTION=G\)](#)
- z [Redirecting the Buyer to Your Website](#)
- z [Do Express Checkout Payment \(ACTION=D\)](#)

## Set Express Checkout (ACTION=S)

The Set Express Checkout request passes the transaction details from your website to PayPal when a buyer chooses to pay with PayPal.

Set Express Checkout requires that you pass data for the following parameters.

- z `ACTION`
- z `AMT`

```
z RETURNURL
z CANCELURL
```

This is an example Set Express Checkout request for a Sale transaction:

```
TRXTYPE=S
&ACTION=S
AMT=35.00
&CANCELURL=http://www.order_page.com
&CUSTOM=TRVV14459
&EMAIL=buyer_name@abc.com
&PARTNER=partner
&PWD=password
&RETURNURL=http://www.confirmation_page.com
&TENDER=P
&USER=user
&VENDOR=vendor
```

**NOTE:** It is strongly recommended that RETURNURL be the URL of the final review page on your website where the buyer confirms the order and payment. Likewise, CANCELURL should be the URL of the original page on your website where the buyer initially chose to use PayPal.

This is a response to the request:

```
RESULT=0
&RESPMSG=Approved
&TOKEN=EC-17C76533PL706494P
```

RESULT and RESPONSE values are returned with all transactions. In a successful response, the value of RESULT is 0. For details on the set of response parameters generally passed back in transactions, see [Chapter 4, “Transaction Responses.”](#) The TOKEN value returned associates this buyer with this particular Express Checkout flow.

## Redirecting the Buyer to PayPal

After your buyer clicks the PayPal button and you submit the Set Express Checkout request, you will want to automatically direct your buyer to the PayPal website. The redirect URL for this is:

```
https://www.paypal.com/cgi-bin/webscr?cmd=_express-checkout&token=<TOKEN>
```

TOKEN is the value returned in the Set Express Checkout response.

**NOTE:** Express Checkout has a variation on this redirect URL (called `useraction`) that allows you to bypass the call to Get Express Checkout Details and to change the text of the button displayed on the PayPal website from “Continue” to “Pay Now.” For more information, see [“Eliminating Your Order Review Page” on page 17.](#)

PayPal recommends that you use the HTTPS response 302 “Object Moved” with your URL as the value of the Location header in the HTTPS response. Alternately, you can generate a web page for your buyer that includes a META REFRESH tag in the header. An example is shown

below. Remember to replace <TOKEN> with the token value that you received in the Set Express Checkout response.

The following example uses the META REFRESH tag.

```
<html>
<head>
  <META HTTP-EQUIV="Refresh"CONTENT="0;URL=https://www.paypal.com/cgi-
bin/webscr?cmd=_express-checkout&token=<TOKEN>">
</head>

<body>
  <!-- Most buyers will see the text below for less than a second. -->
  <!-- Some browser types (example, cell phone)do not support META refresh tags. -->

  <a href="https://www.paypal.com/cgi-bin/webscr?cmd=_express-
checkout&token=<TOKEN>"Click here if you are not redirected to PayPal within
5 seconds.</a>
</body>
</html>
```

## Get Express Checkout Details (ACTION=G)

The Get Express Checkout Details request enables you to retrieve the buyer's billing information, such as the shipping address and email address. If you use Get Express Checkout Details, you need to pass data for these parameters.

z ACTION

z TOKEN

The following is an example Get Express Checkout Details request:

```
TRXTYPE=S
&VENDOR=vendor
&USER=user
&PWD=pwd
&TENDER=P
&PARTNER=partner
&ACTION=G
&TOKEN=EC-17C76533PL706494P
```

The following is the Get Express Checkout Details response:

```
RESULT=0
&RESPMSG=Approved
&AVSADDR=Y
&TOKEN=EC-17C76533PL706494P
&PAYERID=FHY4JXY7CV9PG
&EMAIL=buyer_name@aol.com
&PAYERSTATUS=verified
&FIRSTNAME=J
&LASTNAME=Smith
&CUSTOM=TRVV14459
&BUSINESS=Monroe Creek Regional Interiors
&SHIPTONAME=J Smith
&SHIPTOSTREET=5262 Green Street #8
&SHIPTOCITY=San Jose
&SHIPTOSTATE=CA
&SHIPTOZIP=95148
&SHIPTOCOUNTRY=US
```

## Redirecting the Buyer to Your Website

PayPal redirects the buyer back to your website at the location you specified in the RETURNURL parameter to Get Express Checkout request. To the URL string, PayPal appends the TOKEN and PAYERID name-value pairs, as shown below:

```
http://[RETURNURL]/?token=<TOKEN>&PayerID=<PAYERID>
```

You need to pass the PAYERID in the Do Express Checkout Payment request.

## Do Express Checkout Payment (ACTION=D)

The Do Express Checkout Payment request performs the actual money transfer of the Sale transaction.

Do Express Checkout Payment request requires that you pass data for these parameters.

- z ACTION
- z TOKEN
- z PAYERID
- z AMT

The following is an example Do Express Checkout Payment request:

```
TRXTYPE=S
&VENDOR=vendor
&USER=user
&PWD=pwd
&TENDER=P
PARTNER=partner
&ACTION=D
&TOKEN=EC-17C76533PL706494P
&PAYERID=FHY4JXY7CV9PG
&AMT=35.00
```

The following is an example response:

```
RESULT=0
&PNREF=EFHP0CDBF5C7
&RESPMSG=Approved
&AVSADDR=Y
&TOKEN=EC-17C76533PL706494P
&PAYERID=FHY4JXY7CV9PG
&PPREF=2P599077L3553652G
&PAYMENTTYPE=instantonly
```

The response returns a 12-character `PNREF` (Payflow Transaction ID) that is used to identify this transaction in PayPal reports.

---

## Other Express Checkout Concepts

The following topics are related to processing Express Checkout transactions.

- z [“Obtaining the Buyer’s Telephone Number During Checkout” on page 16](#)
- z [“Pending Responses” on page 17](#)
- z [“Eliminating Your Order Review Page” on page 17](#)

## Obtaining the Buyer’s Telephone Number During Checkout

You have three options regarding the buyer’s contact telephone number. You can choose to:

- z Not request the contact telephone number (default)
- z Request the contact telephone number as an optional field
- z Require that the buyer enter their contact telephone number to proceed.

If you choose to require the buyer provide a telephone number, a telephone number displays in the Contact Information on the PayPal Review page during checkout. Help text tells the buyer how to change the number displayed to their own number.

To choose one of the three preceding options:

1. Log in to your PayPal account.

2. From the Profile tab, click Website Payments Preferences.
3. Choose from the three options for handling the contact telephone number at the bottom of the page.

## Eliminating Your Order Review Page

You can make checkout appear to complete on the PayPal website rather than on your own and, therefore, eliminate the need for an Order Review page on your site. (Of course, when the buyer returns from PayPal, you still call the Do Express Checkout Payment request to complete the transaction.) In this situation, you would want the button text on the PayPal Review page to appear as “Pay Now” rather than “Continue.”

You control the button text through the value of the `useraction` variable. You set this variable on the PayPal URL to which you redirect the buyer after calling Set Express Checkout.

**NOTE:** As a best practice, you should incorporate the “Pay Now” button text in the Express Checkout flow that redirects the buyer to PayPal from your shopping cart at the start of checkout.

Values and resulting button text are described below:

- z If you do not set `useraction` or you set `useraction` to `continue`, PayPal displays the button text “Continue.”
- z If you set `useraction` to `commit`, PayPal displays the button text “Pay Now.”

To display the “Pay Now” button text, for example, append `&useraction=commit` to the redirect URL string as shown below where `tokenvalue` is the token value returned in the Set Express Checkout response.

```
"https://www.paypal.com/cgi-bin/webscr?cmd=_express-checkout&token=tokenvalue&useraction=commit"
```

## Pending Responses

If the Do Express Checkout Payment `PENDINGREASON` response is a value other than `none` or `completed`, the payment is pending. Typically, this means the buyer has paid with an eCheck. In such a case, funds are not guaranteed, and you should not ship or deliver items or services until the payment has successfully completed.

**NOTE:** PayPal recommends that you block eChecks as a payment method in your PayPal account profile if you are unable to handle pending state payments.

To find out the status of a pending payment, you can:

- z Submit an Inquiry transaction.
- z Check the status from the PayPal User Interface. See PayPal online help for details.



# 2

## Billing Agreements and Reference Transactions

This chapter describes how you can automatically bill a buyer's PayPal account based on buyer information you obtained in a previous transaction. To perform this type of transaction you first must obtain a billing agreement between you and the buyer.

- z "About Reference Transactions" on page 19
- z "About Billing Agreements" on page 20
- z "Ways To Obtain a BAID" on page 20
- z "Obtaining the BAID With Express Checkout Purchase" on page 21
- z "Obtaining the BAID Without Express Checkout Purchase" on page 25
- z "Updating a Billing Agreement" on page 29
- z "Using Reference Transactions" on page 30

**IMPORTANT:** *You must be enabled by PayPal to use reference transactions. Contact PayPal for details.*

---

### About Reference Transactions

A *reference transaction* takes existing billing information already gathered from a previously authorized transaction and reuses it to charge the buyer in a subsequent transaction.

Before you can use a reference transaction, you must set up a billing agreement with the buyer. (See [About Billing Agreements](#).) When you obtain the billing agreement, you can withdraw funds from the buyer's PayPal account without manual intervention using a reference transaction. You can only use reference transactions with Authorization or Sale transactions (TRXTYPE is A or S).

To enable line-item support in reference transactions, which includes the parameters below, you must contact Merchant Technical Support at <http://www.paypal.com/mts>:

- z
- L\_NAME $n$  z
- L\_DESC $n$  z
- L\_COST $n$
- z L\_TAXAMT $n$
- z L\_QTY $n$

---

## About Billing Agreements

A *billing agreement* allows PayPal to withdraw funds from the buyer's PayPal account without requiring the buyer to log in to PayPal. Billing agreements are maintained by PayPal.

You must establish a billing agreement with a buyer if, for example, you and the buyer agree that you will bill that buyer on a regularly scheduled basis such as monthly for a magazine subscription. Before a billing agreement can take effect, the buyer must log in to PayPal once to consent to it. With buyer consent, PayPal creates a *billing agreement ID* (BAID) to represent the agreement. You pass the BAID in subsequent requests to bill the buyer. PayPal withdraws funds without requiring the buyer to log in. A billing agreement is good until you or the buyer cancels it.

A buyer may have multiple magazine subscriptions, each with a separate billing agreement. In such cases, be sure to associate each transaction with the correct billing agreement.

---

## About Billing Types

To specify how the buyer will be billed, you set the billing type in the call to Set Express Checkout. [Table 2.1](#) describes the values of this parameter:

**TABLE 2.1** Billing type values

Value	Description
MerchantInitiatedBilling	Use to obtain a BAID in the Express Checkout flow. To initiate billing the buyer one or more times, call Do Express Checkout Payment outside the Express Checkout flow and pass the BAID to bill the buyer.
RecurringBilling	Use to obtain a BAID for creating a recurring billing profile to bill the buyer on a recurring basis. See the <i>Payflow Pro Recurring Billing Service User's Guide</i> for details on using the BAID to create a recurring billing profile.
RecurringPayments	Use to obtain a TOKEN for creating a recurring payments profile to bill the buyer on a recurring basis.  <b>NOTE:</b> This billing type does not create a BAID. See <i>Website Payments Pro Payflow Edition - Recurring Payments Developer's Guide</i> for details on using this billing type value to create a Recurring Payments profile.

---

## Ways To Obtain a BAID

You can obtain a BAID whether or not the buyer logs in to PayPal to make a purchase. The following sections describe how.

- z When the buyer is making a purchase

Say that you have implemented Express Checkout on your website. The buyer logs in to purchase an item of merchandise and chooses PayPal to pay for it. In the normal Express Checkout flow, the buyer is then redirected to PayPal to log in to verify their billing information. If the buyer approves payment on the PayPal Review page, you receive the billing agreement as part of the transaction. You can use that billing agreement later to bill the buyer a set amount on a recurring basis, such as once-a-month, for future purchases. The buyer doesn't need to log into PayPal each time to make a payment.

- z When the buyer is not making a purchase

Typically, the buyer chooses a billing agreement without making a purchase when they subscribe for merchandise they will pay for on a recurring schedule. If, for example, the buyer logs in to your website to order a magazine subscription, you set up an agreement to bill the buyer on a scheduled basis—say, once a month. In the billing agreement flow without purchase, the buyer is redirected to PayPal to log in. On the PayPal site, they consent to the billing agreement. Next month, when you send the buyer the first magazine issue, the billing agreement authorizes you to start charging the buyer's PayPal account on the agreed upon recurring basis without having the buyer log in to PayPal.

The following pages describe ways to obtain a BAID:

- z [“Obtaining the BAID With Express Checkout Purchase” on page 21](#)
- z [“Obtaining the BAID Without Express Checkout Purchase” on page 25](#)

---

## Obtaining the BAID With Express Checkout Purchase

To set up the billing agreement and obtain the BAID when the buyer makes an Express Checkout purchase from your website, you need only provide additional parameters and values in the Express Checkout calls. [Figure 2.1](#) summarizes the flow.



PayPal account. The redirect URL for this is shown below. `TOKEN` is the value returned in the Set Express Checkout response.

```
https://www.paypal.com/cgi-bin/webscr?cmd=_express-checkout&token=<TOKEN>
```

When the buyer logs in, the buyer is presented with a PayPal Review page, such as the example page shown in [Figure 2.2](#).

**FIGURE 2.2** PayPal Review page

### Miata Auto Service

---

Review Your Purchase and Billing Information


Payment For: This is the description of the item

By clicking **Agree and Continue**, I authorize Miata Auto Service to charge my PayPal account for current and future payments based on my relationship with the merchant. PayPal will not share my financial information with this merchant. [How to cancel?](#)

Credit Card: Visa XXXX-XXXX-XXXX-9276  
This credit card transaction will appear on your bill as "MIATAAUTOSE".  
[Change](#)

**PayPal Plus Credit Card:**  Receive extended protection on purchases made via PayPal. [See eligibility](#)

---

Shipping Address: 111 Street address  
Santa Clara, CA 950501  
United States  
[Change](#)

---

Contact Information: uspersonal@paypal.com

---

Agree and Continue

Return to [Miata Auto Service](#).

PayPal protects your privacy and security.  
For more information, read our [User Agreement](#) and [Privacy Policy](#).

4. PayPal redirects the buyer's browser to your return page.
5. Call the Get Express Checkout Details request (`ACTION=G`) to obtain information about the buyer and the buyer's checkout status. PayPal returns checkout details, including whether the billing agreement was accepted.
6. Call the Do Express Checkout Payment request (`ACTION=D`) to complete the purchase.
7. PayPal returns information about the purchase. If the required billing agreement information was passed, PayPal returns a BAID. Save the BAID to implement Payflow reference transactions.

## Example of Obtaining the BAID With Express Checkout Purchase

This section provides an example of Express Checkout Authorization request and response name-value pair strings, illustrating the billing agreement parameters. Billing agreement parameters are shown in boldface.

### Set Express Checkout Request (ACTION=S)

The following is an example of a Set Express Checkout request:

```
PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=S
&TENDER=P
&RETURNURL=http://return.com
&CANCELURL=http://cancel.com&AMT=10.00
&BA_DESC=purchase Time Magazine
&BILLINGTYPE=MerchantInitiatedBilling
&BA_CUSTOM=add magazine subscription
&PAYMENTTYPE=any
```

### Set Express Checkout Response

```
RESULT=0
&RESPMSG=Approved
&CORRELATIONID=ec093d08c9f39
&TOKEN=EC-36X58962RS656712N
```

### Get Express Checkout Details Request (ACTION=G)

The following request contains no new parameters:

```
PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=G
&TENDER=P
&TOKEN=EC-36X58962RS656712N
```

### Get Express Checkout Details Response

```
RESULT=0
&RESPMSG=Approved
&TOKEN=EC-F3BQJQG7UGVDL754
&CORRELATIONID=9c3706997455e
&EMAIL=jsmith@paypal.com
&PAYERSTATUS=verified
&FIRSTNAME=Joe
&LASTNAME=Smith
&SHIPTONAME=Joe Smith
&SHIPTOSTREET=111 Main St
&SHIPTOCITY=San Jose
&SHIPTOSTATE=CA
&SHIPTOZIP=95100
&SHIPTOCOUNTRY=US
```

### Do Express Checkout Payment Request (ACTION=D)

```
PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=D
&TENDER=P
&AMT=10.00
&TOKEN=EC-36X58962RS656712N
&PAYERID=J5MSNK7FP5KA8
```

### Do Express Checkout Payment Response

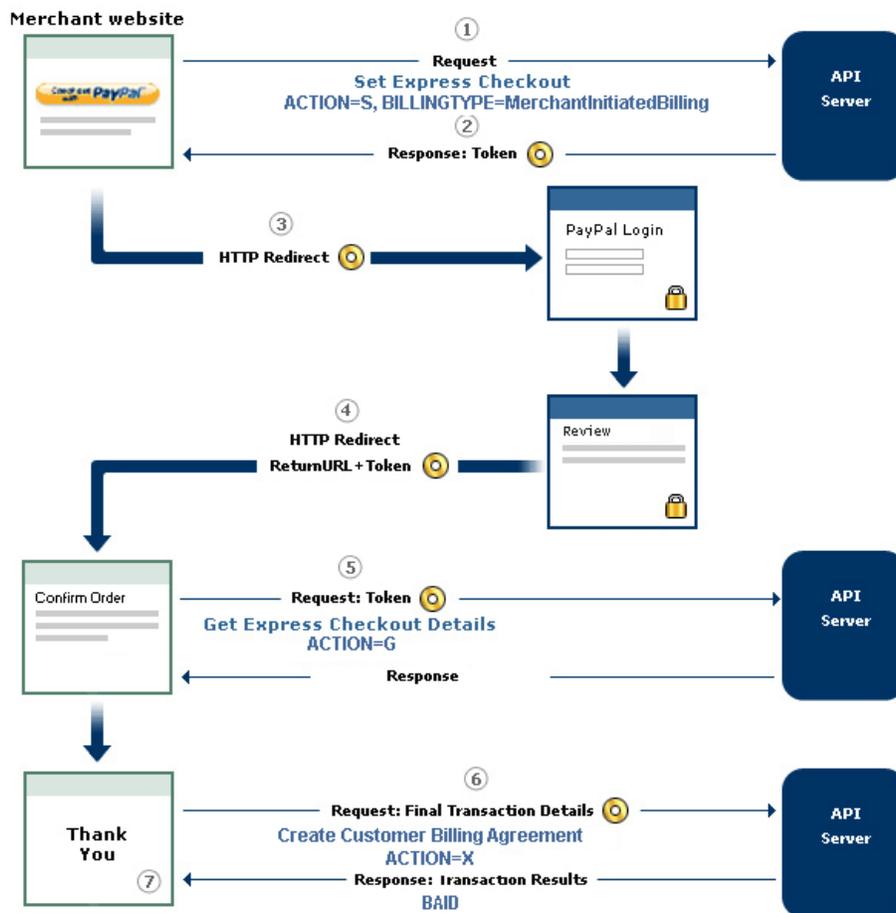
The response returns the BAID:

```
RESULT=0
&PNREF=E24P0A03B013
&RESPMSG=Approved
&TOKEN=EC-11X52562RT656789N
&PPREF=44000000000180903
&CORRELATIONID=3a3204997455r
&BAID=B-12345678901234567
&PAYMENTTYPE=any
&PENDINGREASON=authorization
```

---

## Obtaining the BAID Without Express Checkout Purchase

To set up the billing agreement and obtain the BAID without the buyer making an Express Checkout purchase from your website, you add one new request to create the billing agreement to your current Express Checkout integration. [Figure 2.3](#) summarizes the flow.

**FIGURE 2.3** Obtaining the BAID without Express Checkout purchase

The message flow consists of the following comments, which correspond to the circled numbers in Figure 2.1. The comments pertain specifically to setting up a billing agreement and obtaining a BAID.

1. When the buyer chooses to set up a billing agreement, call the Set Express Checkout request (ACTION=S) and pass information about the agreement:
  - The billing type (required)
  - A description of the goods or services associated with the agreement (optional)
  - The type of PayPal payment you require (optional)
  - A string for your use in any way (optional)

**NOTE:** Even though the buyer is not making a purchase in this flow, provide a value for *AMT*, for example, *AMT=0.00*.

2. PayPal returns a *TOKEN* that you use in subsequent steps.

3. Redirect the buyer's browser to PayPal to allow the buyer to log in to PayPal or set up a PayPal account. After the buyer clicks the PayPal button and you submit the Set Express Checkout request, you will want to automatically direct your buyer to the PayPal website. The redirect URL for this is shown below. TOKEN is the value returned in the Set Express Checkout response.

```
https://www.paypal.com/cgi-bin/webscr?cmd=_express-checkout&token=<TOKEN>
```

The buyer is presented with a PayPal Review page, such as the example page shown in [Figure 2.4](#). The buyer *must* click **Agree and Continue** for steps 5 through 8 below to occur.

**FIGURE 2.4** PayPal Review page

The screenshot shows the PayPal review page for 'jimmie logan's Test Store'. At the top, it says 'Review your information' and features the PayPal logo and 'Secure Payments' icon. Below this, a message states: 'After clicking **Agree and Continue** you will be re-directed to jimmie logan's Test Store. [View PayPal policies](#) and your payment source rights.' The page is divided into two sections: 'Payment Method:' and 'Available Funding Sources'. Under 'Payment Method:', it shows 'Contact Information:' with the email 'jsmith@paypal.com', phone number '408-678-0945', and a 'Change' link. A note below says '(jimmie logan's Test Store requires a phone number to complete this order.)'. Under 'Available Funding Sources:', there is an authorization statement: 'I authorize jimmie logan's Test Store to charge the available funding sources in my PayPal account based on PayPal's default preferences for future payments. PayPal will not share my financial information with this merchant.' and a 'How does it work?' link. At the bottom, there is a prominent orange 'Agree and Continue' button. Below the button, it says 'Cancel and return to [jimmie logan's Test Store](#)'.

4. PayPal redirects the buyer's browser to your return page.
5. Call the Get Express Checkout Details request (ACTION=G) to obtain information about the buyer. PayPal returns the buyer information, including whether the billing agreement was accepted.
6. Call the Create buyer Billing Agreement request (ACTION=X) to obtain the BAID.
7. PayPal returns a BAID. Save the BAID to implement Payflow reference transactions.

## Example of Obtaining the BAID Without Express Checkout Purchase

This section provides an example of obtaining the BAID. The billing agreement parameters (and AMT, which must be 0) are shown in boldface.

### Set Express Checkout Request (ACTION=S)

The following is an example of a Set Express Checkout request that passes billing agreement parameters:

**IMPORTANT:** *Even though no payment is sent, the value of **TRXTYPE** must be **A** in the request strings.*

```
PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=S
&TENDER=P
&RETURNURL=http://return.com
&CANCELURL=http://cancel.com
&AMT=0.00
&BA_DESC=purchase Time magazine
&BILLINGTYPE=MerchantInitiatedBilling
&PAYMENTTYPE=any
&BA_CUSTOM=magazine subscription
```

### Set Express Checkout Response

```
RESULT=0
&RESPMSG=Approved
&TOKEN=EC-36X58962RS656712N
&CORRELATIONID=a398b1f35ebfa
```

### Create Customer Billing Agreement Request (ACTION=X)

The Create Customer Billing Agreement request passes the **TOKEN** returned in the Set Express Checkout response:

```
PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=X
&TENDER=P
&TOKEN=EC-36X58962RS656712N
```

### Create Customer Billing Agreement Response

The response returns the BAID:

```
RESULT=0
&PNREF=E24P0A03B013
&RESPMSG=Approved
&TOKEN=EC-36X58962RS656712N
&PPREF=44000000000180903
&CORRELATIONID=3a3204997455r
&BAID=B-12345678901234567
```

---

## Updating a Billing Agreement

You can use the Update Billing Agreement request to cancel the billing agreement or update the billing agreement description.

Some points to note:

- z *Do not* pass TRXTYPE with this transaction.
- z BAID is the only required parameter (ACTION=U).
- z The only value you can pass for BA\_STATUS is cancel to change the billing agreement status.
- z You can change the billing agreement description by entering a different string value for BA\_DESC.
- z The response does not return a PNREF.

PayPal responds with the BAID and other information about the buyer whose agreement was updated.

Although a buyer can log in to PayPal to manage agreements, the Update Billing Agreement request enables the buyer to cancel an agreement from your website without logging in to PayPal. You can provide your own page for maintaining agreements with the buyer.

## Example of Updating a Billing Agreement

The following is an example of updating a billing agreement description. Billing agreement parameters are shown in boldface:

### Request

```
PARTNER=partner
&VENDOR=vendor
&PWD=password
&TENDER=P
&USER=user
&ACTION=U
&BA_DESC=Description
&BAID=B-92K90916NV400134C
&BA_STATUS=cancel
```

**Response**

```

RESULT=0
&RESPMSG=Approved
&PPREF=68W3371331353001F
&CORRELATIONID=6d348905b0d59
&BAID=B-92K90916NV400134C

```

## Using Reference Transactions

This section provides examples of reference transactions that bill PayPal accounts. The examples illustrate two parameter options. In the reference transaction request, you can pass either of the following name-value pair parameters returned in either the response to Create Customer Billing Agreement (`ACTION=X`) or the response to Do Express Checkout Payment (`ACTION=D`):

- z PNREF passed as value of ORIGID
- z BAID

The examples below are based on Do Express Checkout Payment (`ACTION=D`) and illustrate passing the ORIGID and the BAID. The reference transaction request does not pass the Express Checkout `TOKEN` or `PAYERID` as described in [“Express Checkout Processing Flow” on page 9](#).

### Reference Transaction Request Passing the BAID

**Request**

```

PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=D
&TENDER=P
&AMT=1&BAID=B-12345678901234567

```

**Response**

```

RESULT=0
&PNREF=E24P0A03B014
&RESPMSG=Approved
&PPREF=44000000000180905
&CORRELATIONID=dr093d08c9f01
&FEEAMT=0.33
&BAID=B-12345678901234567
&PAYMENTTYPE=instant
&PENDINGREASON=authorization

```

## Reference Transaction Request Passing the PNREF Value as ORIGID

### Request

In this example, the BAID is not required because the ORIGID is being passed:

```
PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=D
&TENDER=P
&AMT=1
&ORIGID=E24P0A03B013
```

### Response

```
RESULT=0
&PNREF=E24P0A03B015
&RESPMSG=Approved
&PPREF=44000000000180907
&CORRELATIONID=dr093d08c9f01
&BAID=B-12345678901234567
&PAYMENTTYPE=instant
&PENDINGREASON=authorization
```



# 3

## Express Checkout Transaction Types

The Payflow gateway supports transaction types (TRXTYPE) for obtaining payment during the Express Checkout flow as well as for managing the capture of payments after the Express Checkout flow.

- z [Honor Period and Authorization Period](#)
- z [Payment Transaction Types](#)
- z [Sale](#)
- z [Authorization](#)
- z [Order](#)
- z [Do Reauthorization](#)
- z [Do](#)
- [Authorization](#) z
- [Delayed Capture](#) z
- [Void](#)
- z [Credit](#)

---

### Honor Period and Authorization Period

Your business may not be able to provide immediate fulfillment of a product or service. An item, for example, may not be immediately available to ship because it is temporarily out of stock. Under these circumstances, you can have the buyer approve of placing a 29-day hold or *authorization period* on their balance for the amount of the authorization to ensure funds are available for capture.

After a successful authorization, PayPal honors the authorized funds for a three-day *honor period*. You can extend the honor period once with a [Do Reauthorization](#) or multiple times with a [Do Authorization](#).

---

### Payment Transaction Types

During the Express Checkout flow, the following transaction types are supported:

- z [Sale](#) (TRXTYPE=S)
- z [Authorization](#) (TRXTYPE=A)
- z [Order](#) (TRXTYPE=O)

After the Express Checkout flow, you can manage the capture of payment using the following transaction types:

- z                    [Do Reauthorization](#)  
(TRXTYPE=A)
- z                    [Do Authorization](#)  
(TRXTYPE=A) z    [Delayed Capture](#)  
(TRXTYPE=D)    z                    [Void](#)  
(TRXTYPE=V)
- z                    [Credit](#)  
(TRXTYPE=C)

---

## Sale

A Sale transaction charges the specified amount against the account, and marks the transaction for immediate fund transfer.

Use a Sale transaction when you can fulfill an order immediately and you know the final amount of the payment at the time you send the Do Express Checkout Payment Details request. A Sale is appropriate, for example, if you have the items in stock for immediate shipment.

To set up a Sale, set these parameters in the Set Express Checkout, Get Express Checkout Details, and Do Express Checkout Payment requests:

- z    Set Express Checkout request: TRXTYPE=S, ACTION=S
- z    Get Express Checkout Details request (optional): TRXTYPE=S, ACTION=G
- z    Do Express Checkout Payment request: TRXTYPE=S, ACTION=D

After you send the Do Express Checkout Payment request for a Sale transaction, which returns a RESULT value of 0 (success), the payment is complete and no further action is necessary. You cannot capture a further payment or void any part of the payment.

For a detailed example of a Sale transaction, see [Express Checkout Sale Transaction Example](#).

---

## Authorization

An Authorization transaction represents an agreement to pay. It places the buyer's funds on hold for a three-day honor period is valid for 29 days. It does not transfer funds.

If your business does not provide immediate fulfillment of products or services, an Authorization enables you to capture funds with a Delayed Capture transaction when back-ordered merchandise, for example, does become available. You can capture up to the authorized amount specified in the original Authorization transaction.

If you are still not able to complete the Authorization and Delayed Capture within the 29-day period, you can perform a one-time extension of the Authorization using a [Do Reauthorization](#). Merchants get around these limitations by choosing to perform an [Order](#)

transaction instead of an Authorization. Orders provide greater flexibility with fewer time constraints when handling products or services that not immediately available.

An Authorization uses the same parameters as a Sale transaction except that TRXTYPE is A. See [Express Checkout Sale Transaction Example](#) for details.

To set up an Authorization, set these parameters in the Set Express Checkout, Get Express Checkout Details, and Do Express Checkout Payment requests:

- z Set Express Checkout request: TRXTYPE=A, ACTION=S
- z Get Express Checkout Details request (optional): TRXTYPE=A, ACTION=G
- z Do Express Checkout Payment request: TRXTYPE=A, ACTION=D

Note the value of PNREF in the Do Express Checkout Payment response, for example:

```
RESULT=0
&PNREF=EFHP0CDBF5C7
&RESPMSG=Approved
&TOKEN=EC-17C76533PL706494P
&PAYERID=FHY4JXY7CV9PG
&PPREF=2P599077L3553652G
```

To capture authorized funds, you use the PNREF to reference the original Authorization transaction. See [Delayed Capture](#) for details.

## Order

An Order transaction represents an agreement to pay one or more authorized amounts up to the specified total over a maximum of 29 days.

Orders provide you with greater flexibility in delivering merchandise than Authorizations. You should use an Order when a [Sale](#) or an Authorization with a single [Do Reauthorization](#) do not meet your needs. Situations in which Orders are appropriate include the handling of the following:

- z Back orders, in which you send available merchandise immediately and the remaining merchandise, as it is available
- z Split orders, in which you send merchandise in more than one shipment—perhaps to different addresses—and you want to collect a payment for each shipment
- z Drop shipments, or shipments from other vendors, for which you accept the payment

To create multiple authorizations of the Order over the 29-day period, use the [Do Authorization](#) transaction. Each Do Authorization places the buyer's funds on hold for up to three days. If the three-day honor period or the valid authorization period expires, simply create another Do Authorization.

To set up an Order,

1. Set TRXTYPE=O in the Set Express Checkout, Get Express Checkout Details, and Do Express Checkout Payment requests in your Express Checkout flow.

- Set Express Checkout request: TRXTYPE=O, ACTION=S
- Get Express Checkout Details request (optional): TRXTYPE=O, ACTION=G
- Do Express Checkout Payment request: TRXTYPE=O, ACTION=D

2. Note the value of PNREF in the Do Express Checkout Payment response, for example:

```
RESULT=0
&PNREF=EFHP0CDBF5C7
&RESPMSG=Approved
&TOKEN=EC-17C76533PL706494P
&PAYERID=FHY4JXY7CV9PG
&PPREF=2P599077L3553652G
```

To capture an Order, you must first authorize it.

1. To authorize the Order, set ORIGID=PNREF (PNREF value returned in original Order response) and TRXTYPE=A in a Do Authorization transaction request, for example:

```
TRXTYPE=A
&TENDER=P
&PARTNER=partner
&USER=user
&VENDOR=vendor
&PWD=pwd
&ORIGID=EFHP0CDBF5C7
```

This is the Do Authorization response:

```
RESULT=0
&PNREF=EFHP0CDCG6C8
&RESPMSG=Approved
&PPREF=3Q600078M3553652G
```

2. To capture the Do Authorization, set ORIGID=PNREF (PNREF returned in the Do Authorization response) and TRXTYPE=D, for example:

```
"TRXTYPE=Dcg&TENDER=P&PARTNER=partner&USER=user&VENDOR=vendor&PWD=pwd&ORIGID=EFHP0CDBF6C8"
```

---

## Do Reauthorization

To reauthorize an Authorization for an additional three-day honor period, you can use a Do Reauthorization transaction. A Do Reauthorization can be used *at most once* during the 29-day authorization period.

To set up a Do Reauthorization, you must pass the following parameters in the request string:

- z Set ORIGID=PNREF (PNREF returned in the original Authorization response)
- z Set TRXTYPE=A
- z Set DoReauthorization=1

This is an example Do Reauthorization request with required parameters:

```
TRXTYPE=A
&TENDER=P
&PARTNER=partner
&USER=user
&VENDOR=vendor
&PWD=pwd
&ORIGID=EFHP0CDBF5C7
&DOREAUTHORIZATION=1
```

---

## Do Authorization

A Do Authorization transaction represents an agreement to pay and places the buyer's funds from the original Order transaction on hold for up to three days. It does not transfer funds.

**NOTE:** You can only use Do Authorization if the original transaction in the Express Checkout flow is an Order. You cannot use Do Reauthorization against a Do Authorization.

To set up a Do Authorization, you must pass the following parameters in the request string:

- z Set ORIGID=PNREF (PNREF value returned in the original Order transaction response only)

**NOTE:** Do not pass the PPREF returned from the original Order transaction in place of the PNREF.

- z Set TRXTYPE=A

In this example, the PNREF returned in the original Order response is EFHP0CDBF7D9. This is the Do Authorization request string:

```
TRXTYPE=A
&TENDER=P
&PARTNER=partner
&USER=user
&VENDOR=vendor
&PWD=pwd
&ORIGID=EFHP0CDBF7D9
```

---

## Delayed Capture

A Delayed Capture transaction captures authorized funds and transfers them to PayPal. Once a capture is approved, you will see the funds in your PayPal account.

You can capture up to the amount specified in the original Authorization.

## Complete Capture

To set up a capture of the total amount in the original Authorization, you must pass the following parameters in the Delayed Capture request string:

- z Set ORIGID=PNREF (PNREF value returned in the original Authorization, Do Authorization, or Do Reauthorization transaction response)
- z Set TRXTYPE=D

This is an example Delayed Capture request with required parameters.

```
TRXTYPE=D
&TENDER=P
&PARTNER=partner
&USER=user
&VENDOR=vendor
&PWD=pwd
&ORIGID=EFHP0CDBF5C7
```

## Partial Capture

To set up a partial capture of authorized funds, pass the following parameters in the Delayed Capture request string:

- z Set ORIGID=PNREF (PNREF value returned in the original Authorization, Do Authorization, or Do Reauthorization transaction response)
- z Set TRXTYPE=D
- z Set the value for AMT
- z Set CAPTURECOMPLETE=N to perform a partial capture; set CAPTURECOMPLETE=Y to void any remaining amount of the original authorized transaction

This example is based on an initial Authorization for \$100. You charge \$66 for the first partial shipment using a Delayed Capture transaction. You charge the \$34 for the final part of the shipment using a second Delayed Capture transaction.

1. Capture the authorized funds for a partial shipment of \$66.

```
TRXTYPE=D
&TENDER=C
&PWD=SuperUserPassword
&PARTNER=PayPal
VENDOR=SuperMerchant
USER=SuperMerchant
&CAPTURECOMPLETE=N
&ORIGID=EFHP0D426A51
&AMT=66.00
```

2. Once you have shipped the remainder of the merchandise, capture the \$34 balance.

```
TRXTYPE=D&TENDER=C&PWD=SuperUserPassword&PARTNER=PayPal&VENDOR=SuperMerchant&USER=SuperMerchant&CAPTURECOMPLETE=Y&ORIGID=EFHP0D426A51&AMT=34.00
```

---

## Void

A Void transaction voids any of the following transaction types:

- z Order
- z Authorizations (Authorization, Do Authorization, or Do Reauthorization)

**NOTE:** You can use a Void transaction only on transactions that have not yet settled. To refund a buyer's money for a settled transaction, you must use a Credit transaction.

If you void an unsettled transaction, the full authorized amount of the original transaction becomes void and can no longer be captured.

**NOTE:** As part of its internal process, PayPal makes reasonable effort to process authorization reversals for void transactions for debit and credit cards. However, there is no guarantee authorization reversal requests will be honored.

To set up a Void transaction, you must pass the following parameters in the request string:

- z Set `ORIGID=PNREF` (PNREF value returned in the response to the original Authorization or Order)
- z Set `TRXTYPE=V`

This is an example Void transaction request with the required parameters set.

```
TRXTYPE=V  
&TENDER=P  
&PARTNER=partner  
&USER=user  
&VENDOR=vendor  
&PWD=pwd  
&ORIGID=EFHP0CDBF5C7
```

---

## Credit

A Credit transaction refunds the buyer for a settled transaction. Credit transactions are permitted only against existing Sale and Delayed Capture transactions.

To set up a Credit transaction request, you must pass the following parameters in the request string:

- z Set `ORIGID=PNREF` (PNREF value returned in the response to the original Sale or Delayed Capture)
- z Set `TRXTYPE=C`
- z Set the value for `AMT` if the amount of the credit differs from the original Sale or Delayed Capture transaction

This is an example Credit request with the required parameters set:

```
TRXTYPE=C  
&TENDER=P  
PARTNER=partner  
VENDOR=vendor  
&USER=user  
&PWD=password  
&ORIGID=EFHP0D426A62  
&AMT=45.00
```

Say, for example, a buyer purchases merchandise from a particular merchant using the buyer's PayPal account. The merchant can send a Memo Post Sale (above transaction) to Paymentech so Paymentech can include that Sale information in the merchant's Paymentech account. The advantage to the merchant is that the merchant can view PayPal Sale activities in their Paymentech reports.

The merchant uses a Memo Post Credit to send the buyer's Credit transaction information to Paymentech so the merchant can see the buyer's Credit information in their Paymentech reports.

# 4

## Transaction Responses

Transaction response parameters indicate the status of the transaction and return requested information.

- z [Response Parameters](#)
- z [Address Verification Service Responses From PayPal](#)
- z [Card Security Code Results](#)
- z [PNREF Value](#)
- z [RESULT Values and RESPMSG Text](#)

---

### Response Parameters

When a transaction finishes, the server returns a response made up of name-value pairs. For example, this is a response to a Sale transaction request:

```
RESULT=0
&PNREF=EFHP0D426A53
&RESPMSG=APPROVED
&AUTHCODE=25TEST
&AVSADDR=Y
&AVSZIP=N
&CVV2MATCH=Y
&PPREF=68W3371331353001F
&CORRELATIONID=2dc60e253495e
```

Express Checkout transaction responses include the response parameters described below as well as parameters returned by the specific transaction type (`TRXTYPE`) and `ACTION`.

**TABLE 4.1** *General response parameters*

Parameter	Description
RESULT	The outcome of the attempted transaction. A result of 0 (zero) indicates the transaction was approved. Any other number indicates a decline or error. <b>NOTE:</b> The PayPal processor may also return a warning message in the <code>RESPMSG</code> string when <code>RESULT=0</code> . For more information on corrective actions, see the PayPal developer documentation on Developer Central. Limitations: Numeric.
PNREF	Payflow Transaction ID, a unique 12-character alphanumeric string that identifies the transaction.

**TABLE 4.1** General response parameters

Parameter	Description
PPREF	Unique PayPal transaction ID of the payment. If the request ACTION was A (Authorization), you should store the value of PPREF if you need to research a specific transaction with PayPal. Limitations: 17-character string.
RESPMSG	The response message returned with the transaction result. Exact wording varies. Sometimes a colon appears after the initial RESPMSG followed by more detailed information.  <b>NOTE:</b> The PayPal processor may also return a warning message in the RESPMSG string when RESULT=0. For more information on corrective actions, see the PayPal developer documentation on Developer Central.  Limitations: Alphanumeric.
CORRELATIONID	Value used for tracking. Limitations: 13-character alphanumeric string.

## Address Verification Service Responses From PayPal

The table below compares the detailed response returned by the PayPal processor for address verification to the normalized response value (Y, N, or X) returned in the AVSADDR and AVSZIP response parameters. If you want to obtain the PayPal processor value, set the VERBOSITY parameter to MEDIUM. With this setting, the processor value is returned in the PROCavs response parameter.

**TABLE 4.2** Address Verification Service response value mapping

PayPal Processor Address Verification Service Code	Meaning	AVSADDR	AVSZIP
A	Address	Y	N
B	International "A"	Y	N
C	International "N"	N	N
D	International "X"	Y	Y
E	Not allowed for MOTO (Internet/Phone) transactions	X	X
F	UK-specific "X"	Y	Y
G	Global Unavailable	X	X
I	International Unavailable	X	X

**TABLE 4.2 Address Verification Service response value mapping**

PayPal Processor Address Verification Service Code	Meaning	AVSADDR	AVSZIP
N	No	N	N
P	Postal (International “Z”)	N	Y
R	Retry	X	X
S	Service not Supported	X	X
U	Unavailable	X	X
W	Whole Zip	N	Y
X	Exact Match	Y	Y
Y	Yes	Y	Y
Z	Zip	N	Y
All other		X	X

## Card Security Code Results

The `CVV2MATCH` parameter returns Y, N, or X.

The `CVV2MATCH` parameter returns Y, N, X, or a processor-specific response.

## Normalized Results

If you submit the transaction request parameter for card security code (that is, the `CVV2` parameter), the cardholder’s bank returns a normalized Yes/No response in the `CVV2MATCH` response parameter, as described in the table below.

**TABLE 4.3 CVV2MATCH response values**

CVV2MATCH Value	Description
Y	The submitted value matches the data on file for the card
N	The submitted value does not match the data on file for the card.
X	The cardholder’s bank does not support this service.

## PayPal Card Security Code Results

The table below shows the detailed results returned by the PayPal processor for card security codes. If you want to obtain the PayPal processor value, set the `VERBOSITY` parameter to `MEDIUM`. The processor value is returned in the `PROCCVV2` response parameter.

**TABLE 4.4** Card security code response code mapping

PayPal Processor CVV2 Code	PayPal Processor Code Description	PROCCVV2MATCH
M	Match	Y
N	No Match	N
P	Not Processed	X
S	Service Not Supported	X
U	Unavailable	X
X	No Response	X
All other		X

## PNREF Value

The PNREF is a unique transaction identification number issued by PayPal that identifies the transaction for billing, reporting, and transaction data purposes. The PNREF value appears in the Transaction ID column in PayPal Manager reports.

- z The PNREF value is used as the `ORIGID` value (original transaction ID) in Delayed Capture transactions (`TRXTYPE=D`), Credits (`TRXTYPE=C`), Inquiries (`TRXTYPE=I`), and Voids (`TRXTYPE=V`).
- z The PNREF value is used as the `ORIGID` value (original transaction ID) value in reference transactions for Authorization (`TRXTYPE=A`) and Sale (`TRXTYPE=S`).

**NOTE:** The PNREF is also referred to as the Transaction ID in PayPal Manager.

## PNREF Format

The PNREF is a 12-character string of printable characters, for example:

z  
VADE0B248932

z  
ACRAF23DB3C4

**NOTE:** Printable characters also include symbols other than letters and numbers such as the question mark (?). A PNREF typically contains letters and numbers only.

The PNREF in a transaction response tells you that your transaction is connecting to PayPal.

---

## RESULT Values and RESPMSG Text

The `RESULT` parameter and value is the first name-value pair returned in the response string. The value of `RESULT` indicates the overall status of the transaction attempt:

- z A value of 0 (zero) indicates that no errors occurred and the transaction was approved.
- z A value less than zero indicates that a communication error occurred. In this case, no transaction is attempted.
- z A value greater than zero indicates a decline or error (except in the case of `RESULT 104`. See the table below).

The response message (`RESPMSG`) provides a brief description for decline or error results.

## RESULT Values for Transaction Declines or Errors

For non-zero `RESULT` values, the response string includes a `RESPMSG` name-value pair. The exact wording of the `RESPMSG` (shown in **bold**) may vary. Sometimes a colon appears after the initial `RESPMSG` followed by more detailed information.

When interpreting `RESULT` values for the PayPal processor, note the following:

- z When `RESULT=0`, warning information may be returned that is useful to the request application. See the PayPal API documentation on Developer Central for detailed information on corrective actions.
- z When `RESULT=104`, you must log in to the PayPal website to determine if the transaction actually went through. If the transaction does not appear in the History section, you should retry it.

**TABLE 4.5** Payflow Transaction *RESULT* Values and *RESPMSG* Text

RESULT	RESPMSG and Explanation
0	Approved
1	<b>User authentication failed.</b> Error is caused by one or more of the following: <ul style="list-style-type: none"><li>z Login information is incorrect. Verify that <code>USER</code>, <code>VENDOR</code>, <code>PARTNER</code>, and <code>PASSWORD</code> have been entered correctly. <code>VENDOR</code> is your merchant ID and <code>USER</code> is the same as <code>VENDOR</code> unless you created a Payflow Pro user. All fields are case sensitive.</li><li>z Invalid Processor information entered. Contact merchant bank to verify.</li><li>z "Allowed IP Address" security feature implemented. The transaction is coming from an unknown IP address. See PayPal Manager online help for details on how to use Manager to update the allowed IP addresses.</li><li>z You are using a test (not active) account to submit a transaction to the live PayPal servers. Change the host address from the test server URL to the live server URL</li></ul>

**TABLE 4.5 Payflow Transaction RESULT Values and RESPMSG Text**

<b>RESULT</b>	<b>RESPMSG and Explanation</b>
2	<b>Invalid tender type.</b> Your merchant bank account does not support the following credit card type that was submitted.
3	<b>Invalid transaction type.</b> Transaction type is not appropriate for this transaction. For example, you cannot credit an authorization-only transaction
4	<b>Invalid amount format. Use the format: “#####.##” Do not include currency symbols or commas.</b>
5	<b>Invalid merchant information.</b> Processor does not recognize your merchant account information. Contact your bank account acquirer to resolve this problem.
6	<b>Invalid or unsupported currency code</b>
7	<b>Field format error.</b> Invalid information entered. See RESPMSG
8	<b>Not a transaction server</b>
9	<b>Too many parameters or invalid stream</b>
10	<b>Too many line items</b>
11	<b>Client time-out waiting for response</b>
12	<b>Declined.</b> Check the credit card number, expiration date, and transaction information to make sure they were entered correctly. If this does not resolve the problem, have the customer call their card issuing bank to resolve.
13	<b>Referral.</b> Transaction cannot be approved electronically but can be approved with a verbal authorization. Contact your merchant bank to obtain an authorization and submit a manual Voice Authorization transaction.
19	<b>Original transaction ID not found.</b> The transaction ID you entered for this transaction is not valid. See RESPMSG
20	<b>Cannot find the customer reference number</b>
22	<b>Invalid ABA number</b>
23	<b>Invalid account number.</b> Check credit card number and re-submit.
24	<b>Invalid expiration date.</b> Check and re-submit.
25	<p><b>Invalid Host Mapping.</b> Error is caused by one or more of the following:</p> <ul style="list-style-type: none"> <li>z You are trying to process a tender type such as Discover Card, but you are not set up with your merchant bank to accept this card type.</li> <li>z You are trying to process an Express Checkout transaction when your account is not set up to do so. Contact your account holder to have Express Checkout added to your account.</li> </ul>

**TABLE 4.5 Payflow Transaction RESULT Values and RESPMSG Text**

<b>RESULT</b>	<b>RESPMSG and Explanation</b>
26	<b>Invalid vendor account.</b> Login information is incorrect. Verify that USER, VENDOR, PARTNER, and PASSWORD have been entered correctly. VENDOR is your merchant ID and USER is the same as VENDOR unless you created a Payflow Pro user. All fields are case sensitive.
27	<b>Insufficient partner permissions</b>
28	<b>Insufficient user permissions</b>
29	<b>Invalid XML document.</b> This could be caused by an unrecognized XML tag or a bad XML format that cannot be parsed by the system.
30	<b>Duplicate transaction</b>
31	<b>Error in adding the recurring profile</b>
32	<b>Error in modifying the recurring profile</b>
33	<b>Error in canceling the recurring profile</b>
34	<b>Error in forcing the recurring profile</b>
35	<b>Error in reactivating the recurring profile</b>
36	<b>OLTP Transaction failed</b>
37	<b>Invalid recurring profile ID</b>
50	<b>Insufficient funds available in account</b>
51	<b>Exceeds per transaction limit</b>
99	<b>General error.</b> See RESPMSG.
100	<b>Transaction type not supported by host</b>
101	<b>Time-out value too small</b>
102	<b>Processor not available</b>
103	<b>Error reading response from host</b>
104	<b>Timeout waiting for processor response.</b> Try your transaction again.
105	<b>Credit error.</b> Make sure you have not already credited this transaction, or that this transaction ID is for a creditable transaction. (For example, you cannot credit an authorization.)
106	<b>Host not available</b>
107	<b>Duplicate suppression time-out</b>

**TABLE 4.5 Payflow Transaction RESULT Values and RESPMSG Text**

<b>RESULT</b>	<b>RESPMSG and Explanation</b>
<b>108</b>	<b>Void error.</b> See RESPMSG. Make sure the transaction ID entered has not already been voided. If not, then look at the Transaction Detail screen for this transaction to see if it has settled. (The Batch field is set to a number greater than zero if the transaction has been settled). If the transaction has already settled, your only recourse is a reversal (credit a payment or submit a payment for a credit)
<b>109</b>	<b>Time-out waiting for host response</b>
<b>110</b>	<b>Referenced auth (against order) Error</b>
<b>111</b>	<b>Capture error.</b> Either an attempt to capture a transaction that is not an authorization transaction type, or an attempt to capture an authorization transaction that has already been captured.
<b>112</b>	<b>Failed AVS check.</b> Address and ZIP code do not match. An authorization may still exist on the cardholder's account.
<b>113</b>	<b>Merchant sale total will exceed the sales cap with current transaction.</b> ACH transactions only.
<b>114</b>	<b>Card Security Code (CSC) Mismatch.</b> An authorization may still exist on the cardholder's account.
<b>115</b>	<b>System busy, try again later</b>
<b>116</b>	<b>VPS Internal error. Failed to lock terminal number</b>
<b>117</b>	<b>Failed merchant rule check.</b> One or more of the following three failures occurred: An attempt was made to submit a transaction that failed to meet the security settings specified on the PayPal Manager <i>Security Settings</i> page. If the transaction exceeded the Maximum Amount security setting, then no values are returned for AVS or CSC. AVS validation failed. The AVS return value should appear in the RESPMSG. CSC validation failed. The CSC return value should appear in the RESPMSG
<b>118</b>	<b>Invalid keywords found in string fields</b>
<b>120</b>	<b>Attempt to reference a failed transaction</b>
<b>121</b>	<b>Not enabled for feature</b>
<b>122</b>	<b>Merchant sale total will exceed the credit cap with current transaction.</b> ACH transactions only.
<b>125</b>	<b>Fraud Protection Services Filter — Declined by filters</b>

**TABLE 4.5** Payflow Transaction RESULT Values and RESPMSG Text

RESULT	RESPMSG and Explanation
126	<p><b>Fraud Protection Services Filter — Flagged for review by filters</b></p> <p><b>IMPORTANT:</b> RESULT value 126 indicates that a transaction triggered a fraud filter. This is not an error, but a notice that the transaction is in a review status. The transaction has been authorized but requires you to review and to manually accept the transaction before it will be allowed to settle.</p> <p>RESULT value 126 is intended to give you an idea of the kind of transaction that is considered suspicious to enable you to evaluate whether you can benefit from using the Fraud Protection Services.</p> <p>To eliminate RESULT 126, turn the filters off.</p> <p>For more information, see the fraud documentation for your payments solution.</p>
127	<b>Fraud Protection Services Filter — Not processed by filters</b>
128	<b>Fraud Protection Services Filter — Declined by merchant after being flagged for review by filters</b>
132	<b>Card has not been submitted for update</b>
133	<b>Data mismatch in HTTP retry request</b>
150	<b>Issuing bank timed out</b>
151	<b>Issuing bank unavailable</b>
200	<b>Reauth error</b>
201	<b>Order error</b>
600	<b>Cybercash Batch Error</b>
601	<b>Cybercash Query Error</b>
1000	<b>Generic host error.</b> This is a generic message returned by your credit card processor. The RESPMSG will contain more information describing the error.
1001	<b>Buyer Authentication Service unavailable</b>
1002	<b>Buyer Authentication Service — Transaction timeout</b>
1003	<b>Buyer Authentication Service — Invalid client version</b>
1004	<b>Buyer Authentication Service — Invalid timeout value</b>
1011	<b>Buyer Authentication Service unavailable</b>
1012	<b>Buyer Authentication Service unavailable</b>
1013	<b>Buyer Authentication Service unavailable</b>
1014	<b>Buyer Authentication Service — Merchant is not enrolled for Buyer Authentication Service (3-D Secure)</b>

**TABLE 4.5 Payflow Transaction RESULT Values and RESPMSG Text**

<b>RESULT</b>	<b>RESPMSG and Explanation</b>
1016	<b>Buyer Authentication Service — 3-D Secure error response received.</b> Instead of receiving a PARES response to a Validate Authentication transaction, an error response was received.
1017	<b>Buyer Authentication Service — 3-D Secure error response is invalid.</b> An error response is received and the response is not well formed for a Validate Authentication transaction.
1021	<b>Buyer Authentication Service — Invalid card type</b>
1022	<b>Buyer Authentication Service — Invalid or missing currency code</b>
1023	<b>Buyer Authentication Service — merchant status for 3D secure is invalid</b>
1041	<b>Buyer Authentication Service — Validate Authentication failed: missing or invalid PARES</b>
1042	<b>Buyer Authentication Service — Validate Authentication failed: PARES format is invalid</b>
1043	<b>Buyer Authentication Service — Validate Authentication failed: Cannot find successful Verify Enrollment</b>
1044	<b>Buyer Authentication Service — Validate Authentication failed: Signature validation failed for PARES</b>
1045	<b>Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid amount in PARES</b>
1046	<b>Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid acquirer in PARES</b>
1047	<b>Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid Merchant ID in PARES</b>
1048	<b>Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid card number in PARES</b>
1049	<b>Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid currency code in PARES</b>
1050	<b>Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid XID in PARES</b>
1051	<b>Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid order date in PARES</b>
1052	<b>Buyer Authentication Service — Validate Authentication failed: This PARES was already validated for a previous Validate Authentication transaction</b>

# 5

## Express Checkout Testing

You can set up the testing of your integration using two methods.

- z [Testing Your Integration Using the Sandbox](#)
- z [Testing Your Integration Using the PayPal Simulator](#)

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### Testing Your Integration Using the Sandbox

To set up the testing of your integration using the Sandbox:

- z [Create A Business Account](#)
- z [Create a Payflow Test Account](#)
- z [Link Your Payflow Pro Account to the Sandbox](#)

### Create A Business Account

If you do not already have a Payflow account, follow the procedure below to create one. If your account is already set up, proceed to [“Create a Payflow Test Account” on page 52](#)

1. Sign up for a Payflow Pro test account. Go to the following URL and click **Continue**:  
<https://registration.paypal.com/productSelectionInit.do>
2. Either log in with your existing PayPal account or create a new account by clicking Sign Up.
3. PayPal Manager account information:
  - Merchant Login: (Enter all lowercase characters, for example, yourcompanynametest.)
  - Password: (The password is case sensitive. Choose a password you can remember. If you enter it incorrectly too many times, you will be locked out.)
4. Complete the information in the Business Information section.
5. Complete the information in the Business Owner Contact Information section, and click **Continue**.
6. On the Internet Merchant Account application, click **Save and Exit**.
7. To test your login, go to <https://manager.paypal.com/> and enter the following:
  - Partner Name: PayPal
  - Merchant login: yourcompanynametest

- Password: (your password)

Your account should show the following status message: Your account is currently in TEST status. You can run only test transactions.

8. Click **Log Out**.

## Create a Payflow Test Account

To create Payflow test account, follow the procedure below:

1. If you have an existing Sandbox account, log in to the Sandbox. Otherwise, click **Sign Up Now** and create a Sandbox Seller account.
2. Once you are logged into the PayPal Sandbox Test environment, click **Test Accounts**.
3. Click **Create Test Account**.
4. For Country, select United States. For Account Type, select Seller.
5. Note the Seller's login email address and password.
6. Click **Show Advanced Options**.
7. Add a balance of 500 to the Seller account.

## Link Your Payflow Pro Account to the Sandbox

To link your Payflow Pro account to the Sandbox, follow the procedure below:

1. Click the Contact Support tab.
2. Enter the Subject as: Link Payflow Pro to Sandbox
3. Provide the following:
  - Your Payflow Pro Merchant account login email address
  - The login email address of the Seller account you created in the Sandbox Test Environment
4. Submit the ticket.

Your Merchant ID and Sandbox Seller account will be linked within 72 hours, allowing you to redirect Express Checkout transactions through the Sandbox environment. Be sure to:

- z Send all test transaction requests as POSTs to the Payflow host address: <https://pilot-payflowpro.paypal.com>
- z Send Express Checkout redirects to:  
[https://www.sandbox.paypal.com/cgi-bin/webscr?cmd=\\_express-checkout&token=<ec-token>](https://www.sandbox.paypal.com/cgi-bin/webscr?cmd=_express-checkout&token=<ec-token>)

**NOTE:** You must be logged into the Sandbox before redirecting.

You should also create a Buyer account in the Sandbox to make test Express Checkout purchases against your Seller account. Be sure to add a positive balance to the Buyer account at the time of creation.

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## Testing Your Integration Using the PayPal Simulator

To test your integration using the simulator, direct all test transactions to the Payflow host address for testing: <https://pilot-payflowpro.paypal.com>

Transactions are processed through PayPal's simulated payment network, enabling you to test the configuration and operation of your application or storefront—with no money changing hands.

**NOTE:** You must activate your account and configure your application for live transactions in PayPal Manager before accepting real orders.





# Express Checkout Parameter Reference

This reference describes all parameters that can be used with the Express Checkout payment solution.

- z [“Connection Parameter Descriptions” on page 55](#)
- z [“User Parameter Descriptions” on page 56](#)
- z [“Express Checkout Parameter Descriptions” on page 57](#)
- z [“Do Reauthorization Parameter Descriptions” on page 75](#)
- z [“Do Authorization Parameter Descriptions” on page 74](#)
- z [“Void Parameter Descriptions” on page 75](#)
- z [“Credit Parameter Descriptions” on page 76](#)
- z [“Delayed Capture Parameter Descriptions” on page 77](#)
- z [“Billing Agreement Parameter Descriptions” on page 78](#)
- z [“Reference Transaction Parameter Descriptions” on page 81](#)

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## Connection Parameter Descriptions

Pass the connection parameters in the format and syntax required by the Payflow gateway and programming language that you are using. See your integration documentation for details.

**TABLE A.1** Connection request parameters

Parameter	Description
HOSTADDRESS	(Required) Payflow host name
HOSTPORT	(Required) Use port 443.
PARMLIST	(Required) List of parameters that specify the payment information for the transaction. The quotation marks “ ” at the beginning and end are required. The following is an example: <pre>"TRXTYPE=S&amp;TENDER=C&amp;PARTNER=Partner&amp;VENDOR=vendor&amp;USER=user&amp;PWD=password&amp;ACCT=5555555555554444&amp;EXPDATE=0308&amp;AMT=123.00"</pre> The content of the PARMLIST varies by the type of transaction being processed. For example, a Void transaction requires a different set of parameters than a Sale.
PROXYADDRESS	(Optional) Proxy server address. Use the PROXY parameters for servers behind a firewall. Your network administrator can provide the values.
PROXYPORT	(Optional) Proxy server port.

**TABLE A.1 Connection request parameters**

Parameter	Description
PROXYLOGON	(Optional) Proxy server logon ID.
PROXYPASSWORD	(Optional) Proxy server logon password.

## User Parameter Descriptions

All Payflow transaction requests require the user parameters described below.

**TABLE A.2 User request parameters**

Parameter	Description
USER	(Required) If you set up one or more additional users on the account, this value is the ID of the user authorized to process transactions. If, however, you have not set up additional users on the account, USER has the same value as VENDOR. Limitations: 64 alphanumeric, case-sensitive characters.Limitations: 64 alphanumeric, case-sensitive characters.
VENDOR	(Required) Your merchant login ID that you created when you registered for the account. Limitations: 64 alphanumeric, case-sensitive characters.Limitations: 64 alphanumeric, case-sensitive characters.
PARTNER	(Required) The ID provided to you by the authorized PayPal Reseller who registered you for the Payflow Pro service. Limitations: 64 alphanumeric, case-sensitive characters.
PWD	(Required) The password that you defined while registering for the account. Limitations: Six- to thirty-two alphanumeric, case-sensitive characters.

## Express Checkout Parameter Descriptions

### Set Express Checkout Request Parameter Descriptions

**TABLE A.3** Set Express Checkout request parameters

Parameter	Description
TRXTYPE	<p>(Required) How you want to obtain payment:</p> <ul style="list-style-type: none"> <li>z A indicates that this payment is an Authorization subject to settlement with the Delayed Capture request</li> <li>z O indicates that this payment is an Order subject to settlement with the Delayed Capture request</li> <li>z S indicates that this is a final Sale for which you are requesting payment</li> </ul> <p><b>NOTE:</b> You cannot set this value to S in the Set Express Checkout request and then change this value to A on the final Do Express Checkout Payment request.</p> <p>Limitations: One alpha character.</p>
TENDER	<p>(Required) The tender type (method of payment). It is always P.</p> <p>Limitations: One alpha character.</p>
ACTION	<p>(Required) Is S to indicate this is a Set Express Checkout request.</p> <p>Limitations: One alpha character.</p>
AMT	<p>(Required) Amount (US Dollars) U.S. based currency.</p> <p><b>NOTE:</b> You must set CURRENCY to one of the currency codes for any of the supported PayPal currencies.</p> <p>Set AMT=0.00 when passing the billing type value MerchantInitiatedBilling to use the TOKEN returned by the Set Express Checkout response as a parameter in a request to create a billing agreement.</p> <p>Limitations: Must not exceed \$10,000 USD in any currency. Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p> <p>Nine numeric characters plus decimal.</p>
CURRENCY	<p>(Required) One of the supported currency codes. See <a href="#">“Currency Codes” on page 87.</a>”</p>
RETURNURL	<p>(Required) URL to which the buyer’s browser is returned after choosing to pay.</p> <p>Limitations: Character string with no maximum length.</p>

**TABLE A.3 Set Express Checkout request parameters**

Parameter	Description
CANCELURL	<i>(Required)</i> URL to which the buyer is returned if the buyer cancels the order. Limitations: Character string with no maximum length.
TOKEN	<i>(Optional)</i> Include this parameter to modify an existing Sale or Authorization request. The value is returned in a previous Set Express Checkout response. Limitations: 20-character alphanumeric string.
L_BILLINGTYPE <i>n</i>	<i>(Optional)</i> Describes the billing type for a PayPal account that will be billed with Recurring Payments. Set to <code>RecurringPayments</code> to use the <code>TOKEN</code> returned in the Set Express Checkout response to create a Recurring Payments profile. . Either <code>L_BILLINGTYPE<i>n</i></code> or <code>BILLINGTYPE</code> must be passed to create a Recurring Payments profile. If you pass <code>L_BILLINGTYPE<i>n</i></code> and <code>BILLINGTYPE</code> , <code>BILLINGTYPE</code> will be ignored. Each <code>L_BILLINGTYPE<i>n</i></code> must have a corresponding description string ( <code>L_BILLINGAGREEMENTDESCRIPTION<i>n</i></code> ). See <i>Website Payments Pro Payflow Edition - Recurring Payments Developer's Guide</i> for details on creating Recurring Payments profiles. Character length and limitations: A string. <i>n</i> is a value in the range 0-9.
L_BILLINGAGREEMENTDESCRIPTION <i>n</i>	<i>(Optional)</i> Describes the billing type for a PayPal account that will be billed with Recurring Payments. See <code>L_BILLINGTYPE<i>n</i></code> . Character length and limitations: A string. <i>n</i> is a value in the range 0-9.
BILLINGTYPE	<i>(Optional)</i> Describes the billing type for a PayPal account. The possible values are: z <code>MerchantInitiatedBilling</code> Use this value to obtain a BAID in the Set Express Checkout flow. z <code>RecurringPayments</code> Use this value to use the <code>TOKEN</code> returned in the Set Express Checkout response to create a Recurring Payments profile. See <i>Website Payments Pro Payflow Edition - Recurring Payments Developer's Guide</i> for details on creating Recurring Payments profiles. Character length and limitations: A string. <i>n</i> is a value in the range 0-9.
BA_DESC	<i>(Optional)</i> Describes the billing agreement for a PayPal account. If <code>BILLINGTYPE</code> is <code>RecurringPayments</code> , <code>BA_DESC</code> is required. Limitations: 255-character string.
BA_CUSTOM	<i>(Optional)</i> Custom annotation field for your exclusive use with billing agreements. Limitations: 255-character string

**TABLE A.3 Set Express Checkout request parameters**

Parameter	Description
PAYMENTTYPE	<p>(Optional) Is one of the following values:</p> <ul style="list-style-type: none"> <li>z <code>instantonly</code> - The payment is made with no delay.</li> <li>z <code>any</code> - The payment may be made with no delay or the payment is pending.</li> </ul> <p>Limitations: 11 characters.</p>
L_NAME <i>n</i>	<p>(Optional) Line-item name.</p> <p>Character length and limitations: 36 alphanumeric characters.</p>
L_DESC <i>n</i>	<p>(Optional) Line-item description for each different item purchased such as hiking boots or cooking utensils.</p> <p><b>NOTE:</b> You can view line item information in the Transaction Details report in your PayPal merchant account.</p> <p>Limitations: 35-character string.</p>
L_COST <i>n</i>	<p>(Required if L_QTY<i>n</i> is supplied) Cost of the line item. The line-item unit price can be a positive or a negative value but not 0.</p> <p><b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p> <p>Nine numeric characters plus decimal.</p>
L_TAXAMT <i>n</i>	<p>(Optional) Line-item tax amount.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
L_QTY <i>n</i>	<p>(Required if L_COST<i>n</i> is supplied) Line-item unit quantity.</p> <p>Limitations: 10-character integer.</p>
ITEMAMT	<p>(Required if L_COST<i>n</i> is specified) Sum of cost of all items in this order.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>

**TABLE A.3 Set Express Checkout request parameters**

Parameter	Description
TAXAMT	<p>(Required if L_TAXAMTn is specified) Sum of tax for all items in this order.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
FREIGHTAMT	<p>(Optional) Total shipping cost for this order.</p> <p><b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
HANDLINGAMT	<p>(Optional) Total handling cost for this order.</p> <p><b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
DISCOUNT	<p>(Optional) Shipping discount for this order. Specify the discount as a positive amount.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
INSURANCEAMT	<p>(Optional) Total shipping insurance cost for this order.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
ALLOWNOTE	<p>(Optional) Is 1 or 0 (default). If 1, the buyer may enter a note in the Express Checkout flow to be returned by the responses to Get Express Checkout Details and Do Express Checkout Payment.</p> <p>Limitations: Numeric.</p>

**TABLE A.3 Set Express Checkout request parameters**

Parameter	Description
MAXAMT	(Optional) The expected maximum total amount of the complete order, including shipping and tax charges. Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
ORDERDESC	(Optional) Description of items the buyer is purchasing. Limitations: 127-character alphanumeric string.
CUSTOM	(Optional) Free-form field for your own use such as a tracking number or other value you want PayPal to return in the Get Express Checkout Details response. Limitations: 256-character alphanumeric string.
INVNUM	(Optional) Merchant invoice number. If you do not provide an invoice number, the transaction ID (PNREF) will be submitted. Limitations: Nine-character alphanumeric string.
PHONENUM	Account holder's telephone number. Limitations: 20-character string. The field mask is: xxx-xxx-xxxx (US numbers) +xxxxxxxxxxxx (international numbers)
REQBILLINGADDRESS	(Optional) Is 1 or 0. The value 1 indicates that you require that the buyer's shipping address on file with PayPal be a confirmed address. Setting this element overrides the setting you have specified in your Merchant Account Profile. Limitations: One character.
REQCONFIRMSHIPPING	(Optional) Is 1 or 0. The value 1 indicates that you require that the buyer's shipping address on file with PayPal be a confirmed address. Setting this element overrides the setting you have specified in your Merchant Account Profile. Limitations: One character.
NOSHIPPING	(Optional) Is 1 or 0. The value 1 indicates that on the PayPal pages, no shipping address fields should be displayed whatsoever. Limitations: Four-character string.
ADDROVERRIDE	(Optional) Is 1 or 0. The value 1 indicates that the PayPal pages should display the shipping address set by you in the shipping address (SHIPTO* parameters) passed to this Set Express Checkout request, not the shipping address on file with PayPal for this buyer. Limitations: Four-character string.

**TABLE A.3 Set Express Checkout request parameters**

Parameter	Description
LOCALECODE	<p>(Optional) Locale of pages displayed by PayPal during Express Checkout</p> <p>Limitations: Two-character string.</p> <p>AT</p> <p>AU</p> <p>BE</p> <p>CA</p> <p>CH</p> <p>CN</p> <p>DE</p> <p>ES</p> <p>FR</p> <p>GB</p> <p>IT</p> <p>JP</p> <p>NL</p> <p>PL</p> <p>US</p>
PAGESTYLE	<p>(Optional) Sets the Custom Payment Page Style for payment pages associated with this button/link. PageStyle corresponds to the HTML variable <code>page_style</code> for customizing payment pages</p> <p>The value is the same as the Page Style Name you chose when adding or editing the page style from the Profile subtab of the My Account tab of your PayPal account.</p> <p>Limitations: 30-character alpha string.</p>
HDRIMG	<p>(Optional) A URL for the image you want to appear at the top left of the payment page. The image has a maximum size of 750 pixels wide by 90 pixels high. PayPal recommends that you provide an image that is stored on a secure (https) server.</p> <p>Limitations: 127-character string.</p>
HDRBORDERCOLOR	<p>(Optional) Sets the border color around the header of the payment page. The border is a two-pixel perimeter around the header space, which is 750 pixels wide by 90 pixels high.</p> <p>Limitations: Six-character HTML hexadecimal color code in ASCII.</p>
HDRBACKCOLOR	<p>(Optional) Sets the background color for the header of the payment page.</p> <p>Limitations: Six-character HTML hexadecimal color code in ASCII.</p>
PAYFLOWCOLOR	<p>(Optional) Sets the background color for the payment page.</p> <p>Limitations: Six-character HTML hexadecimal color code in ASCII.</p>

**TABLE A.3 Set Express Checkout request parameters**

Parameter	Description
EMAIL	(Optional) Email address of the buyer as entered during checkout. PayPal uses this to fill out the PayPal membership sign-up portion of the PayPal login page. Limitations: 127-character alphanumeric string.
SHIPTONAME	(Optional) Ship-to name. Limitations: 32-character string.
SHIPTOSTREET	(Optional) Ship-to street address. Limitations: 30-character string.
SHIPTOSTREET2	(Optional) Extended Ship-to street address. Example: Bldg. 6, Mail Stop 3. Limitations: 30-character string.
SHIPTOCITY	(Optional) Ship-to city. Limitations: 40-character string.
SHIPTOSTATE	(Optional) Ship-to state. Limitations: 40-character string.
SHIPTOZIP	(Optional) Ship-to postal code. Limitations: 16-character string.
SHIPTOCOUNTRY	(Optional) Ship-to country. Limitations: Two-character country code.

## Set Express Checkout Response Parameter Descriptions

**TABLE A.4 Set Express Checkout response parameters**

Parameter	Description
TOKEN	A time-stamped token by which you identify to PayPal that you are processing this payment with Express Checkout. The token expires after three hours. If you set <code>TOKEN</code> in the Set Express Checkout request, the value of <code>TOKEN</code> in the response is identical to the value in the request. Limitations: 20-character string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## Get Express Checkout Details Request Parameter Descriptions

**TABLE A.5** Get Express Checkout Details request parameters

Parameter	Description
TRXTYPE	<p>(Required) How you want to obtain payment:</p> <ul style="list-style-type: none"> <li>z A indicates that this payment is an Authorization subject to settlement with the Delayed Capture request</li> <li>z O indicates that this payment is an Order subject to settlement with the Delayed Capture request</li> <li>z S indicates that this is a final Sale for which you are requesting payment</li> </ul> <p><b>NOTE:</b> You cannot set this value to S in the Set Express Checkout request and then change this value to A on the final Do Express Checkout Payment request.</p> <p>Limitations: One alpha character.</p>
TENDER	<p>(Required) The tender type (method of payment). It is always P.</p> <p>Limitations: One alpha character.</p>
ACTION	<p>(Required) Is G to indicate this is a Get Express Checkout Details request.</p> <p>Limitations: One alpha character.</p>
TOKEN	<p>(Required) A time-stamped token, the value of which was returned in the Set Express Checkout response.</p> <p>Limitations: 20-character alphanumeric string.</p>

## Get Express Checkout Details Response Parameter Descriptions

**TABLE A.6** Get Express Checkout Details response parameters

Parameter	Description
TOKEN	<p>The time-stamped token value that was returned in the Set Express Checkout response.</p> <p>Limitations: 20-character alphanumeric string.</p>
EMAIL	<p>Email address of the buyer as entered during checkout.</p> <p>Limitations: 127-character alphanumeric string.</p>
PAYERID	<p>Unique PayPal buyer account identification number.</p> <p>Limitations: 13-character string.</p>

**TABLE A.6** Get Express Checkout Details response parameters

Parameter	Description
PAYERSTATUS	Status of buyer. Values are: z verified z unverified Limitations: 10-character string.
DISCOUNT	Shipping discount for this order. Specify the discount as a positive amount. Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
INSURANCEAMT	Total shipping insurance cost for this order. Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
NOTE	Is 0 (default) or 1. If ALLOWNOTE is set to 1 in the Set Express Checkout request, NOTE will contain the text entered by the buyer in the Express Checkout flow. Limitations: 255-character string.
ADJUSTMENTAMT	A discount or gift certificate offered by PayPal to the buyer. This amount will be represented by a negative amount. If the buyer has a negative PayPal account balance, PayPal adds the negative balance to the transaction amount, which is represented as a positive value. The negative amount is returned for Payflow merchants. <b>NOTE:</b> To test this value as a negative amount against the simulator, send the amount as 1250 in the Set Express Checkout request and use the returned TOKEN in the Get Express Checkout Details request to see the ADJUSTMENTAMT response as a negative value. Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
FIRSTNAME	Buyer's first name. Limitations: 25-character string.
LASTNAME	Buyer's last name. Limitations: 25-character string.

**TABLE A.6** Get Express Checkout Details response parameters

Parameter	Description
SHIPTONAME	Ship-to name. If you include a shipping address and provide a value for the AddressOverride (ADDROVERRIDE) parameter, PayPal returns this same address in the Get Express Checkout Details response. Limitations: 32-character string.
SHIPTOSTREET	Ship-to street address If you include a shipping address and provide a value for the AddressOverride (ADDROVERRIDE) parameter, PayPal returns this same address in the Get Express Checkout Details response. Limitations: 30-character string.
SHIPTOSTREET2	Extended Ship-to street address. Example: Bldg. 6, Mail Stop 3. Limitations: 30-character string.
SHIPTOCITY	Ship-to city. Limitations: 40-character string.
SHIPTOSTATE	Ship-to state. Limitations: 40-character string.
SHIPTOZIP	Ship-to postal code. Limitations: 16-character string.
SHIPTOCOUNTRY	Ship-to country. Limitations: Two-character country code.
SHIPTOBUSINESS	Buyer's business name. Limitations: 127-character string.
CUSTOM	Free-form field for your own use as set by you in the Set Express Checkout request. Limitations: 256-character alphanumeric string.
INVNUM	Merchant invoice number. If you do not provide an invoice number, the transaction ID (PNREF) will be submitted. Limitations: Nine-character alphanumeric string.
PHONENUM	Account holder's telephone number. Limitations: 20-character string. The field mask is: xxx-xxx-xxxx (US numbers) +xxxxxxxxxxxx (international numbers)

**TABLE A.6** Get Express Checkout Details response parameters

Parameter	Description
BILLTNAME	<p>Bill-to name.</p> <p><b>NOTE:</b> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.</p> <p>Limitations: 32 alphanumeric characters.</p>
STREET	<p>Bill-to street.</p> <p><b>NOTE:</b> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.</p> <p>Limitations: 100 alphanumeric characters.</p>
STREET2	<p>Second bill-to street address.</p> <p><b>NOTE:</b> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.</p> <p>Limitations: 100 alphanumeric characters.</p>
CITY	<p>Bill-to city address.</p> <p><b>NOTE:</b> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.</p> <p>Limitations: 45 alphanumeric characters.</p>
STATE	<p>Bill-to state address.</p> <p><b>NOTE:</b> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.</p> <p>Limitations: 45 alphanumeric characters.</p>
ZIP	<p>U.S. zip code or other country-specific postal code.</p> <p><b>NOTE:</b> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.</p> <p>Limitations: 10 alphanumeric characters.</p>
COUNTRYCODE	<p>Bill-to country code.</p> <p><b>NOTE:</b> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.</p> <p>Limitations: Four alphanumeric characters.</p>

**TABLE A.6** Get Express Checkout Details response parameters

Parameter	Description
ADDRESSSTATUS	Status of the bill-to address on file with PayPal. The values are: <ul style="list-style-type: none"> <li>z Y = confirmed</li> <li>z N = unconfirmed</li> </ul> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout. Limitations: One alpha character.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## Do Express Checkout Payment Request Parameter Descriptions

**TABLE A.7** Do Express Checkout Payment request parameters

Parameter	Description
TRXTYPE	(Required) How you want to obtain payment: <ul style="list-style-type: none"> <li>z A indicates that this payment is an Authorization subject to settlement with the Delayed Capture request</li> <li>z O indicates that this payment is an Order subject to settlement with the Delayed Capture request</li> <li>z S indicates that this is a final Sale for which you are requesting payment</li> </ul> <p><b>NOTE:</b> You cannot set this value to S in the Set Express Checkout request and then change this value to A on the final Do Express Checkout Payment request.</p> Limitations: One alpha character.
TENDER	(Required) The tender type (method of payment). It is always P. Limitations: One alpha character.
TOKEN	(Required) The timestamped token that was returned in the Set Express Checkout response. Limitations: 20-character string.
ACTION	(Required) Is D to indicate this is a Set Express Checkout request. Limitations: One alpha character.
PAYERID	(Required) Unique PayPal buyer account identification number, as returned by Get Express Checkout Details response. This value is returned in the URL when the buyer is redirected to your website. Limitations: 13-character string.

**TABLE A.7 Do Express Checkout Payment request parameters**

Parameter	Description
AMT	<i>(Required)</i> Amount. Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
ORDERURL	<i>(Optional)</i> Your URL for displaying information about this transaction, such as receipt, shipment tracking, or order details. Limitations: 127-character alphanumeric string.
ORDERDESC	<i>(Optional)</i> Description of items the buyer is purchasing. Limitations: 127-character alphanumeric string.
CUSTOM	<i>(Optional)</i> Free-form field for your own use. Limitations: 256-character alphanumeric string.
INVMNUM	<i>(Optional)</i> Merchant invoice number. The merchant invoice number is used for authorizations and settlements and, depending on your merchant bank, will appear on your buyer's credit card statement and your bank reconciliation report. If you do not provide an invoice number, the transaction ID (PNREF) will be submitted. Limitations: Nine alphanumeric characters.
BUTTONSOURCE	<i>(Optional)</i> Identification code for use by third-party applications to identify transactions. Limitations: 32 alphanumeric characters.
NOTIFYURL	<i>(Optional)</i> Your URL for receiving Instant Payment Notification (IPN) about this transaction. <b>NOTE:</b> If you do not specify NotifyURL in the request, the notification URL from your Merchant Profile is used, if one exists. Limitations: 2048 alphanumeric characters.
L_NAME <i>n</i>	<i>(Optional)</i> Line-item name. Character length and limitations: 36 alphanumeric characters.
L_DESC <i>n</i>	<i>(Optional)</i> Line-item description for each different item purchased such as hiking boots or cooking utensils. <b>NOTE:</b> You can view line item information in the Transaction Details report in your PayPal merchant account. Limitations: 35-character string.

**TABLE A.7 Do Express Checkout Payment request parameters**

Parameter	Description
L_COSTn	<p>(Required if L_QTYn is supplied) Cost of the line item. The line-item unit price can be a positive or a negative value but not 0.</p> <p><b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p> <p>Nine numeric characters plus decimal.</p>
L_TAXAMTn	<p>(Optional) Line-item tax amount.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
L_QTYn	<p>(Required if L_COSTn is supplied) Line-item unit quantity.</p> <p>Limitations: 10-character integer.</p>
ITEMAMT	<p>(Required if L_COSTn is specified) Sum of cost of all items in this order.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
TAXAMT	<p>(Required if L_TAXAMTn is specified) Sum of tax for all items in this order.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
FREIGHTAMT	<p>(Optional) Total shipping cost for this order.</p> <p><b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>

**TABLE A.7 Do Express Checkout Payment request parameters**

Parameter	Description
HANDLINGAMT	<p>(Optional) Total handling cost for this order.</p> <p><b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
DISCOUNT	<p>(Optional) Shipping discount for this order. Specify the discount as a positive amount.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
INSURANCEAMT	<p>(Optional) Total shipping insurance cost for this order.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
SHIPTONAME	<p>(Optional) Ship-to name.</p> <p>Limitations: 32-character string.</p>
SHIPTOSTREET	<p>(Optional) Ship-to street address.</p> <p>If you include a shipping address and provide a value for the ADDROVERRIDE parameter, PayPal returns this same address in the Get Express Checkout Details response.</p> <p>Limitations: 30-character string.</p>
SHIPTOSTREET2	<p>(Optional) Extended Ship-to street address. Example: Bldg. 6, Mail Stop 3.</p> <p>Limitations: 30-character string.</p>
SHIPTOCITY	<p>(Optional) Ship-to city.</p> <p>If SHIPTOCITY is passed, you also must pass SHIPTOSTREET, SHIPTOSTATE, SHIPTOZIP, and SHIPTOCOUNTRY.</p> <p>Limitations: 40-character string.</p>
SHIPTOSTATE	<p>(Optional) Ship-to state.</p> <p>If SHIPTOSTATE is passed, you also must pass SHIPTOSTREET, SHIPTOCITY, SHIPTOZIP, and SHIPTOCOUNTRY.</p> <p>Limitations: 40-character string.</p>

**TABLE A.7 Do Express Checkout Payment request parameters**

Parameter	Description
SHIPTOZIP	(Optional) Ship-to postal code. If SHIPTOZIP is passed, you also must pass SHIPTOSTREET, SHIPTOCITY, SHIPTOSTATE, and SHIPTOCOUNTRY. Limitations: 16-character string.
SHIPTOCOUNTRY	(Optional) Ship-to country. If SHIPTOCOUNTRY is passed, you also must pass SHIPTOSTREET, SHIPTOCITY, SHIPTOSTATE, and SHIPTOZIP. Limitations: Two-character country code.
PHONENUM	(Optional) Account holder's telephone number. Limitations: 20-character string. The field mask is: xxx-xxx-xxxx (US numbers) +xxxxxxxxxxxx (international numbers)

## Do Express Checkout Payment Response Parameter Descriptions

**TABLE A.8 Do Express Checkout Payment response parameters**

Parameter	Description
TOKEN	The timestamped token that was returned in the Set Express Checkout response. Limitations: 20-character string.
PPREF	Unique PayPal transaction ID. If the request ACTION was A (Authorization), you should store the value of PPREF if you need to research a specific transaction with PayPal. Limitations: 17-character string.
BAID	The billing agreement ID is returned if BILLINGTYPE is passed in the Set Express Checkout request to set up a billing agreement. Limitations: 19-character string.
PAYMENTTYPE	Returns one of the following values: z <i>instantonly</i> - The payment is made with no delay. z <i>any</i> - The payment may be made with no delay or the payment is pending (see PENDINGSTATUS). Limitations: 11 characters.

**TABLE A.8 Do Express Checkout Payment response parameters**

Parameter	Description
TAXAMT	Sum of tax for all items in this order. Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
FEEAMT	Processor charge for the transaction. Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
NOTE	Is 0 (default) or 1. If ALLOWNOTE is set to 1 in the Set Express Checkout request, NOTE will contain the text entered by the buyer in the Express Checkout flow. Limitations: 255-character string.
PENDINGREASON	The reason the payment is pending. Values are: <ul style="list-style-type: none"> <li>z none = No pending reason.</li> <li>z address = The payment is pending because your buyer did not include a confirmed shipping address and your Payment Receiving Preferences is set such that you want to manually accept or deny each of these payments. To change your preference, go to the Preferences section of your Profile.</li> <li>z echeck = The payment is pending because it was made by an eCheck that has not yet cleared.</li> <li>z intl = The payment is pending because you hold a non-U.S. account and do not have a withdrawal mechanism. You must manually accept or deny this payment from your Account Overview.</li> <li>z multi-currency = You do not have a balance in the currency sent, and you do not have your Payment Receiving Preferences set to automatically convert and accept this payment. You must manually accept or deny this payment.</li> <li>z verify = The payment is pending because you are not yet verified. You must verify your account before you can accept this payment.</li> <li>z completed = The payment has been completed, and the funds have been added successfully to your account balance.</li> <li>z other = The payment is pending for a reason other than those listed above. For more information, contact PayPal Customer Service.</li> </ul>
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## Do Authorization Parameter Descriptions

**TABLE A.9 Do Authorization request parameters**

Parameter	Description
TRXTYPE	<i>(Required)</i> The type of transaction to perform. For a Do Authorization, the value is A. Limitations: One alpha character.
TENDER	<i>(Required)</i> The tender type (method of payment). It is always P. Limitations: One alpha character.
ORIGID	<i>(Required)</i> Payflow transaction ID. To authorize an Order, set this parameter to the value of the PNREF returned in the Do Express Checkout Payment response when Do Express Checkout Payment request was submitted with TRXTYPE=O. Limitations: 12 case-sensitive alphanumeric characters.
AMT	<i>(Optional)</i> Amount. If you do not pass a value for AMT, the amount of the original transaction is sent in the Do Authorization request. Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.

**TABLE A.10 Do Authorization response parameters**

Parameter	Description
PPREF	Unique PayPal transaction ID. Limitations: 17-character string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## Do Reauthorization Parameter Descriptions

**TABLE A.11 Do Reauthorization request parameters**

Parameter	Description
TRXTYPE	<i>(Required)</i> How you want to obtain payment. Is A, which indicates that this payment is an Authorization or a Do Authorization subject to settlement with the Delayed Capture request. Limitations: One alpha character.
TENDER	<i>(Required)</i> The tender type (method of payment). It is always P. Limitations: One alpha character.
ORIGID	<i>(Required)</i> Payflow transaction ID, which is the value returned in the PNREF in the response to the original transaction when: TRXTYPE=A or TRXTYPE=O. Limitations: 12 case-sensitive alphanumeric characters.
DOREAUTHORIZATION	<i>(Required)</i> Indicates whether this transaction is a Do Reauthorization. The value is 1.

**TABLE A.12 Do Reauthorization response parameters**

Parameter	Description
PPREF	Unique PayPal transaction ID. Limitations: 17-character string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## Void Parameter Descriptions

**TABLE A.13 Void request parameters**

Parameter	Description
TRXTYPE	<i>(Required)</i> Type of transaction to perform. The value is V. Limitations: One alpha character.
TENDER	<i>(Required)</i> The tender type (method of payment). It is always P. Limitations: One alpha character.

**TABLE A.13 Void request parameters**

Parameter	Description
ORIGID	<i>(Required)</i> Payflow transaction ID. Set this parameter to the value of the PNREF returned in the original transaction response when Do Express Checkout Payment request was submitted with TRXTYPE=O. Limitations: 12 case-sensitive alphanumeric characters.
NOTE	<i>(Optional)</i> An informal note about this settlement that is displayed to the buyer in email and in the buyer's transaction history Limitations: 255-character string.

**TABLE A.14 Void response parameters**

Parameter	Description
PPREF	Unique PayPal transaction ID. Limitations: 17-character string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## Credit Parameter Descriptions

**TABLE A.15 Credit request parameters**

Parameter	Description
TRXTYPE	<i>(Required)</i> Type of transaction to perform. The value is C. Limitations: One alpha character.
TENDER	<i>(Required)</i> The tender type (method of payment). It is always P. Limitations: One alpha character.
ORIGID	<i>(Required)</i> Payflow transaction ID. Set this parameter to the value of the PNREF returned in the original Authorization or Order Do Express Checkout Payment transaction response. Limitations: 12 case-sensitive alphanumeric characters.
AMT	<i>(Optional) Required</i> if the amount to credit differs from the original Sale or Delayed Capture amount. Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.

**TABLE A.15 Credit request parameters**

Parameter	Description
MEMO	(Optional) Custom memo about the credit. Limitations: 255 alphanumeric characters.

**TABLE A.16 Credit response parameters**

Parameter	Description
PPREF	Unique PayPal transaction ID. Limitations: 17-character string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## Delayed Capture Parameter Descriptions

**TABLE A.17 Delayed Capture request parameters**

Parameter	Description
TRXTYPE	(Required) Type of transaction to perform. The value is D. Limitations: One alpha character.
TENDER	(Required) The tender type (method of payment). It is always P. Limitations: One alpha character.
ORIGID	(Required) Payflow transaction ID. Set this parameter to the value of the PNREF returned in the original Authorization or Order Do Express Checkout Payment transaction response. Limitations: 12 case-sensitive alphanumeric characters.
AMT	(Optional) Required if the capture amount differs from the original Authorization amount. Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
NOTE	(Optional) An informal note about this settlement that is displayed to the buyer in email and in the buyer's transaction history Limitations: 255-character string.

**TABLE A.17 Delayed Capture request parameters**

Parameter	Description
CAPTURECOMPLETE	<p>(Optional) Indicates if this Delayed Capture transaction is the last capture you intend to make. The values are:</p> <ul style="list-style-type: none"> <li>z Y (default)</li> <li>z N</li> </ul> <p>If CAPTURECOMPLETE is Y, any remaining amount of the original reauthorized transaction is automatically voided.</p> <p>Limitations: 12-character alphanumeric string.</p>

**TABLE A.18 Delayed Capture response parameters**

Parameter	Description
PPREF	<p>Unique PayPal transaction ID.</p> <p>Limitations: 17-character string.</p>
PAYMENTTYPE	<p>Type of payment. Values are:</p> <ul style="list-style-type: none"> <li>z <i>instantonly</i> - The payment is made with no delay.</li> <li>z <i>any</i> - The payment may be made with no delay or the payment is pending.</li> </ul> <p>Limitations: 11 characters.</p>
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## Billing Agreement Parameter Descriptions

### Create Customer Billing Agreement Request Parameters

**TABLE A.19 Create Customer Billing Agreement request parameters**

Parameter	Description
ACTION	<p>(Required) Is X to indicate this is a Create Customer Billing Agreement without purchase request.</p> <p>Limitations: One alpha character.</p>
TOKEN	<p>(Required) A time-stamped token, the value of which was returned in the Set Customer Billing Agreement response.</p> <p>Limitations: 20-character alphanumeric string.</p>
TRXTYPE	(Required) Must be A.

**TABLE A.19 Create Customer Billing Agreement request parameters**

Parameter	Description
TENDER	<i>(Required)</i> The tender type (method of payment). It is always P. Limitations: One alpha character.

## Create Customer Billing Agreement Response Parameters

**TABLE A.20 Create Customer Billing Agreement response parameters**

Parameter	Description
BAID	The billing agreement ID. Limitations: 19-character string.
TOKEN	A time-stamped token, the value of which was returned in the Set Customer Billing Agreement response. Limitations: 20-character alphanumeric string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## Update Customer Billing Agreement Request Parameters

**TABLE A.21 Update Customer Billing Agreement request parameters**

Parameter	Description
ACTION	<i>(Required)</i> Is U to indicate this is an Update Billing Agreement request. Limitations: One alpha character.
TENDER	<i>(Required)</i> The tender type (method of payment). It is always P. Limitations: One alpha character.
BAID	<i>(Required)</i> The billing agreement ID. Limitations: 19-character string.
BA_CUSTOM	<i>(Optional)</i> Custom annotation field for your exclusive use. Limitations: 255-character string.
BA_DESC	<i>(Optional)</i> Description of goods or services associated with the billing agreement. Limitations: 255-character string.
BA_STATUS	<i>(Optional)</i> The status of the billing agreement. The only value is <code>cancel</code> .

## Update Customer Billing Agreement Response Parameters

**TABLE A.22 Update Customer Billing Agreement response parameters**

Parameter	Description
BAID	The billing agreement ID. Limitations: 19-character string.
BA_CUSTOM	Custom annotation field for your exclusive use. Limitations: 255-character string.
BA_DESC	Description of goods or services associated with the billing agreement. Limitations: 255-character string.
EMAIL	Email address of the buyer as entered during checkout. Limitations: 127-character alphanumeric string.
PAYERSTATUS	Status of buyer. Values are: z verified z unverified Limitations: 10-character string.
PHONENUM	Account holder's telephone number. Limitations: 20-character string. The field mask is: xxx-xxx-xxxx (US numbers) +xxxxxxxxxxxx (international numbers)
FIRSTNAME	Buyer's first name. Limitations: 25-character string.
LASTNAME	Buyer's last name. Limitations: 25-character string.
SHIPTOBUSINESS	Buyer's business name. Limitations: 127-character string.
SHIPTOSTREET	<i>(Optional)</i> Ship-to street address. If SHIPTOSTREET is passed, you also must pass SHIPTOCITY, SHIPTOSTATE, SHIPTOZIP, and SHIPTOCOUNTRY. Limitations: 30-character string.
SHIPTOSTREET2	<i>(Optional)</i> Extended Ship-to street address. Example: Bldg. 6, Mail Stop 3. Limitations: 30-character string.
SHIPTOCITY	<i>(Optional)</i> Ship-to city. If SHIPTOCITY is passed, you also must pass SHIPTOSTREET, SHIPTOSTATE, SHIPTOZIP, and SHIPTOCOUNTRY. Limitations: 40-character string.

**TABLE A.22 Update Customer Billing Agreement response parameters**

Parameter	Description
SHIPTOSTATE	<i>(Optional)</i> Ship-to state. If SHIPTOSTATE is passed, you also must pass SHIPTOSTREET, SHIPTOCITY, SHIPTOZIP, and SHIPTOCOUNTRY. Limitations: 40-character string.
SHIPTOZIP	<i>(Optional)</i> Ship-to postal code. If SHIPTOZIP is passed, you also must pass SHIPTOSTREET, SHIPTOCITY, SHIPTOSTATE, and SHIPTOCOUNTRY. Limitations: 16-character string.
SHIPTOCOUNTRY	<i>(Optional)</i> Ship-to country. If SHIPTOCOUNTRY is passed, you also must pass SHIPTOSTREET, SHIPTOCITY, SHIPTOSTATE, and SHIPTOZIP. Limitations: Two-character country code.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## Reference Transaction Parameter Descriptions

### Reference Transaction Request Parameters

**TABLE A.23 Reference Transaction Request Parameters**

Parameter	Description
ACTION	<i>(Required)</i> Is the value D.
TRXTYPE	<i>(Required)</i> Is A (Authorization) or S (Sale).
BAID	<i>(Required, PayPal and Paymentech Salem processors)</i> BAID returned from Create Customer Billing Agreement. If you pass BAID, do not pass ORIGID.
ORIGID	<i>(Required, other Payflow processors)</i> PNREF returned from Create Customer Billing. If you pass ORIGID, do not pass BAID.
CUSTIP	<i>(Optional)</i> IP address of payer’s browser as recorded in its HTTP request to your website. <b>NOTE:</b> PayPal records this IP address as a means to detect possible fraud. Limitations: 15-character string in dotted quad format: xxx.xxx.xxx.xxx.

**TABLE A.23 Reference Transaction Request Parameters**

Parameter	Description
PAYMENTTYPE	<p>(Optional) Is one of the following values:</p> <ul style="list-style-type: none"> <li>z <code>instantonly</code> - The payment is made with no delay.</li> <li>z <code>any</code> - The payment may be made with no delay or the payment is pending.</li> </ul> <p>Limitations: 11 characters.</p>
REQCONFIRMSHIPPING	<p>(Optional) Is 1 or 0. The value 1 indicates that you require that the buyer's shipping address on file with PayPal be a confirmed address. Setting this element overrides the setting you have specified in your Merchant Account Profile.</p> <p>Limitations: One character.</p>
CURRENCY	<p>(Required) One of the supported currency codes. See <a href="#">Appendix , "Currency Codes."</a></p>
ORDERDESC	<p>(Optional) Description of items the buyer is purchasing</p> <p>Limitations: 127-character alphanumeric string.</p>
CUSTOM	<p>(Optional) Free-form field for your own use such as a tracking number or other value you want PayPal to return in the Get Express Checkout Details response.</p> <p>Limitations: 256-character alphanumeric string.</p>
INVNUM	<p>(Optional) Merchant invoice number. If you do not provide an invoice number, the transaction ID (<code>PNREF</code>) will be submitted.</p> <p>Limitations: Nine-character alphanumeric string.</p>
BUTTONSOURCE	<p>(Optional) Identification code for use by third-party applications to identify transactions.</p> <p>Limitations: 32 alphanumeric characters.</p>
NOTIFYURL	<p>(Optional) Your URL for receiving Instant Payment Notification (IPN) about this transaction.</p> <p><b>NOTE:</b> If you do not specify <code>NotifyURL</code> in the request, the notification URL from your Merchant Profile is used, if one exists.</p> <p>Limitations: 2048 alphanumeric characters.</p>
L_NAME $n$	<p>(Optional) Line-item name.</p> <p>Character length and limitations: 36 alphanumeric characters.</p>
L_DESC $n$	<p>(Optional) Line-item description for each different item purchased such as hiking boots or cooking utensils.</p> <p>Limitations: 35-character string.</p>

**TABLE A.23 Reference Transaction Request Parameters**

Parameter	Description
L_COSTn	<p>(Optional) Line-item unit price. The line-item unit price can be a positive or a negative value but not 0. You may provide a negative value to reflect a discount on an order, for example.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
L_TAXAMTn	<p>(Optional) Line-item tax amount.</p> <p>Limitations: Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95. No currency symbol.</p> <p>Limitations: Six-character currency.</p>
L_QTYn	<p>(Optional) Line-item unit quantity.</p> <p>Limitations: 10-character integer.</p>
AMT	<p>(Required) Amount (US Dollars) U.S. based currency.</p> <p>AMT=ITEMAMT + TAXAMT + FREIGHTAMT + HANDLINGAMT + INSURANCEAMT - DISCOUNT</p> <p><b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.</p> <p>Limitations: Must not exceed \$10,000 USD in any currency. Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p> <p>Nine numeric characters plus decimal.</p>
ITEMAMT	<p>(Required if L_COSTn is specified) Sum of cost of all items in this order.</p> <p>ITEMAMT = L_QTY0*LCOST0 + L_QTY1*LCOST1...L_QTYn*L_COSTn</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>

**TABLE A.23 Reference Transaction Request Parameters**

Parameter	Description
TAXAMT	<p>(Required if L_TAXAMTn is specified) Sum of tax for all items in this order.</p> $\text{TAXAMT} = \text{L\_QTY0} * \text{L\_TAXAMT0} + \text{L\_QTY1} * \text{L\_TAXAMT1} + \dots + \text{L\_QTYn} * \text{L\_TAXAMTn}$ <p><b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p> <p>Nine numeric characters plus decimal.</p>
FREIGHTAMT	<p>(Optional) Total shipping cost for this order.</p> <p><b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
HANDLINGAMT	<p>(Optional) Total handling cost for this order.</p> <p><b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
DISCOUNT	<p>(Optional) Shipping discount for this order. Specify the discount as a positive amount.</p> <p>Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.</p>
SHIPTONAME	<p>(Optional) Ship-to name.</p> <p>Limitations: 32-character string.</p>
SHIPTOSTREET	<p>(Optional) Ship-to street address.</p> <p>Limitations: 30-character string.</p>

**TABLE A.23 Reference Transaction Request Parameters**

Parameter	Description
SHIPTOSTREET2	(Optional) Extended Ship-to street address. Example: Bldg. 6, Mail Stop 3. Limitations: 30-character string.
SHIPTOCITY	(Optional) Ship-to city. Limitations: 40-character string.
SHIPTOSTATE	(Optional) Ship-to state. Limitations: 40-character string.
SHIPTOZIP	(Optional) Ship-to postal code. Limitations: 16-character string.
COUNTRYCODE	(Optional) Bill-to country code. <b>NOTE:</b> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout. Limitations: Four alphanumeric characters.

## Reference Transaction Response Parameters

**TABLE A.24 Reference Transaction Response Parameters**

Parameter	Description
BAID	BAID returned from Create Customer Billing Agreement. Limitations: 19-character string.
PAYMENTTYPE	Returns one of the following values: z instantly - The payment is made with no delay. z any - The payment may be made with no delay or the payment is pending. Limitations: 11 characters.



# B

## Currency Codes

The following currencies are supported for use in transactions.

**TABLE B.1 Currencies and Currency Codes**

Code	Currency
AUD	Australian Dollar
BRL	Brazilian Real <b>NOTE:</b> Supported as a payment currency and a currency balance for in-country PayPal accounts only.
CAD	Canadian Dollar
CZK	Czech Koruna
DKK	Danish Krone
EUR	Euro
HKD	Hong Kong Dollar
HUF	Hungarian Forint
ILS	Israeli New Sheqel
JPY	Japanese Yen
MYR	Malaysian Ringgit <b>NOTE:</b> Supported as a payment currency and a currency balance for in-country PayPal accounts only.
MXN	Mexican Peso
	Norwegian Krone
NZD	New Zealand Dollar
PHP	Phillippine Peso
PLN	Polish Zloty
GBP	Pound Sterling
SGD	Singapore Dollar
SEK	Swedish Krona
CHF	Swiss Franc
TWD	Taiwan New Dollar

**TABLE B.1 Currencies and Currency Codes**

<b>Code</b>	<b>Currency</b>
THB	Thai Baht
USD	U.S. Dollar



# Country Codes

**NOTE:** This table lists country codes defined by [ISO 3166-1](#).

**Table 1: Country Codes**

Country	Code
AFGHANISTAN	AF
ÅLAND ISLANDS	AX
ALBANIA	AL
ALGERIA	DZ
AMERICAN SAMOA	AS
ANDORRA	AD
ANGOLA	AO
ANGUILLA	AI
ANTARCTICA	AQ
ANTIGUA AND BARBUDA	AG
ARGENTINA	AR
ARMENIA	AM
ARUBA	AW
AUSTRALIA	AU
AUSTRIA	AT
AZERBAIJAN	AZ
BAHAMAS	BS
BAHRAIN	BH
BANGLADESH	BD
BARBADOS	BB

Country	Code
BELARUS	BY
BELGIUM	BE
BELIZE	BZ
BENIN	BJ
BERMUDA	BM
BHUTAN	BT
BOLIVIA	BO
BOSNIA AND HERZEGOVINA	BA
BOTSWANA	BW
BOUVET ISLAND	BV
BRAZIL	BR
BRITISH INDIAN OCEAN TERRITORY	IO
BRUNEI DARUSSALAM	BN
BULGARIA	BG
BURKINA FASO	BF
BURUNDI	BI
CAMBODIA	KH
CAMEROON	CM
CANADA	CA
CAPE VERDE	CV
CAYMAN ISLANDS	KY



## Country Codes

<b>Country</b>	<b>Code</b>	<b>Country</b>	<b>Code</b>
CENTRAL AFRICAN REPUBLIC	CF	EQUATORIAL GUINEA	GQ
CHAD	TD	ERITREA	ER
CHILE	CL	ESTONIA	EE
CHINA	CN	ETHIOPIA	ET
CHRISTMAS ISLAND	CX	FALKLAND ISLANDS (MALVINAS)	FK
COCOS (KEELING) ISLANDS	CC	FAROE ISLANDS	FO
COLOMBIA	CO	FIJI	FJ
COMOROS	KM	FINLAND	FI
CONGO	CG	FRANCE	FR
CONGO, THE DEMO- CRATIC REPUBLIC OF THE	CD	FRENCH GUIANA	GF
COOK ISLANDS	CK	FRENCH POLYNESIA	PF
COSTA RICA	CR	FRENCH SOUTHERN TERRITORIES	TF
COTE D'IVOIRE	CI	GABON	GA
CROATIA	HR	GAMBIA	GM
CUBA	CU	GEORGIA	GE
CYPRUS	CY	GERMANY	DE
CZECH REPUBLIC	CZ	GHANA	GH
DENMARK	DK	GIBRALTAR	GI
DJIBOUTI	DJ	GREECE	GR
DOMINICA	DM	GREENLAND	GL
DOMINICAN REPUBLIC	DO	GRENADA	GD
ECUADOR	EC	GUADELOUPE	GP
EGYPT	EG	GUAM	GU
EL SALVADOR	SV	GUATEMALA	GT
		GUERNSEY	GG

<b>Country</b>	<b>Code</b>	<b>Country</b>	<b>Code</b>
GUINEA	GN	KOREA, REPUBLIC OF	KR
GUINEA-BISSAU	GW	KUWAIT	KW
GUYANA	GY	KYRGYZSTAN	KG
HAITI	HT	LAO PEOPLE'S DEMO- CRATIC REPUBLIC	LA
HEARD ISLAND AND MCDONALD ISLANDS	HM	LATVIA	LV
HOLY SEE (VATICAN CITY STATE)	VA	LEBANON	LB
HONDURAS	HN	LESOTHO	LS
HONG KONG	HK	LIBERIA	LR
HUNGARY	HU	LIBYAN ARAB JAMA- HIRIYA	LY
ICELAND	IS	LIECHTENSTEIN	LI
INDIA	IN	LITHUANIA	LT
INDONESIA	ID	LUXEMBOURG	LU
IRAN, ISLAMIC REPUB- LIC OF	IR	MACAO	MO
IRAQ	IQ	MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF	MK
IRELAND	IE	MADAGASCAR	MG
ISLE OF MAN	IM	MALAWI	MW
ISRAEL	IL	MALAYSIA	MY
ITALY	IT	MALDIVES	MV
JAMAICA	JM	MALI	ML
JAPAN	JP	MALTA	MT
JERSEY	JE	MARSHALL ISLANDS	MH
JORDAN	JO	MARTINIQUE	MQ
KAZAKHSTAN	KZ	MAURITANIA	MR
KENYA	KE	MAURITIUS	MU
KIRIBATI	KI	MAYOTTE	YT
KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF	KP	MEXICO	MX

## Country Codes

Country	Code	Country	Code
MICRONESIA, FEDERATED STATES OF	FM	PALAU	PW
MOLDOVA, REPUBLIC OF	MD	PALESTINIAN TERRITORY, OCCUPIED	PS
MONACO	MC	PANAMA	PA
MONGOLIA	MN	PAPUA NEW GUINEA	PG
MONTSERRAT	MS	PARAGUAY	PY
MOROCCO	MA	PERU	PE
MOZAMBIQUE	MZ	PHILIPPINES	PH
MYANMAR	MM	PITCAIRN	PN
NAMIBIA	NA	POLAND	PL
NAURU	NR	PORTUGAL	PT
NEPAL	NP	PUERTO RICO	PR
NETHERLANDS	NL	QATAR	QA
NETHERLANDS ANTILLES	AN	REUNION	RE
NEW CALEDONIA	NC	ROMANIA	RO
NEW ZEALAND	NZ	RUSSIAN FEDERATION	RU
NICARAGUA	NI	RWANDA	RW
NIGER	NE	SAINT HELENA	SH
NIGERIA	NG	SAINT KITTS AND NEVIS	KN
NIUE	NU	SAINT LUCIA	LC
NORFOLK ISLAND	NF	SAINT PIERRE AND MIQUELON	PM
NORTHERN MARIANA ISLANDS	MP	SAINT VINCENT AND THE GRENADINES	VC
NORWAY	NO	SAMOA	WS
OMAN	OM	SAN MARINO	SM
PAKISTAN	PK		

<b>Country</b>	<b>Code</b>	<b>Country</b>	<b>Code</b>
SAO TOME AND PRINC- IPE	ST	TANZANIA, UNITED REPUBLIC OF	TZ
SAUDI ARABIA	SA	THAILAND	TH
SENEGAL	SN	TIMOR-LESTE	TL
SERBIA AND MON- TENEGRO	CS	TOGO	TG
SEYCHELLES	SC	TOKELAU	TK
SIERRA LEONE	SL	TONGA	TO
SINGAPORE	SG	TRINIDAD AND TOBAGO	TT
SLOVAKIA	SK	TUNISIA	TN
SLOVENIA	SI	TURKEY	TR
SOLOMON ISLANDS	SB	TURKMENISTAN	TM
SOMALIA	SO	TURKS AND CAICOS ISLANDS	TC
SOUTH AFRICA	ZA	TUVALU	TV
SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS	GS	UGANDA	UG
SPAIN	ES	UKRAINE	UA
SRI LANKA	LK	UNITED ARAB EMIR- ATES	AE
SUDAN	SD	UNITED KINGDOM	GB
SURINAME	SR	UNITED STATES	US
SVALBARD AND JAN MAYEN	SJ	UNITED STATES MINOR OUTLYING ISLANDS	UM
SWAZILAND	SZ	URUGUAY	UY
SWEDEN	SE	UZBEKISTAN	UZ
SWITZERLAND	CH	VANUATU	VU
SYRIAN ARAB REPUB- LIC	SY	VENEZUELA	VE
TAIWAN, PROVINCE OF CHINA	TW	VIET NAM	VN
TAJKISTAN	TJ	VIRGIN ISLANDS, BRIT- ISH	VG



## Country Codes

---

<b>Country</b>	<b>Code</b>
VIRGIN ISLANDS, U.S.	VI
WALLIS AND FUTUNA	WF
WESTERN SAHARA	EH
YEMEN	YE
ZAMBIA	ZM
ZIMBABWE	ZW

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