



**100-6.1-065-001-1.1**

## **Guide to Setting Up Your Cheetah PBX**

**Software Release 6.1, Document Issue 1.1**

April 27, 2011

Technical Data Subject to Change Without Notice



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# 1 About This Document

## 1.1 Intended Audience


This document is intended for PBX installers and system administrators. It has been designed to guide you through installation and configuration of your Cheetah 1000 PBX.


Having a basic knowledge of a PBX or IVR, Linux and Microsoft® Windows® is helpful but not required.

## 1.2 Conventions Used In This Document

This manual uses several conventions to help you learn to use the program quickly and easily.

Menus and dialog options that have an underlined letter in their name represent the shortcut key assigned to the menu or option. Pressing the shortcut keys assigned to the menu or option is equivalent to clicking the menu or option. For example, the following figure shows a sample menu that uses shortcut keys. Procedures in this manual reflect shortcut keys if they are available.

The Caution and Warning symbol, , indicates information or a step that could be potentially dangerous, such as a step that could permanently affect the database or a user's access to the program.

The light bulb, , indicates a tip or information that will help you in using this document.

## 1.3 Disclaimer

This document is provided to you for informational purposes only and is believed to be accurate as of the date of its publication, and is subject to change without notice. Telegato LLC assumes no responsibility for any errors or omissions in this document and shall have no obligation to you as a result of having made this document available to you or based upon the information it contains.

## 1.4 Logging In

To log in to the System Management Console refer to the Logging In Guide.

## 2 General

The Cheetah 1000 is a flexible, self-contained PBX. The Cheetah 1000 accommodates VoIP traffic, and up to two PSTN line interface modules.

This document will show you how to perform the low level configuration (instead of using the wizard) to modify or prepare your system to answer inbound calls and provide the many features available to those callers as well as people using the internal VoIP phones.

This document is for those that have a basic understanding of PBX terminology and concepts.

### 2.1 Concepts

There are certain design and use concepts that will help you understand how to create and maintain an auto attendant.

#### 2.1.1 System Menus

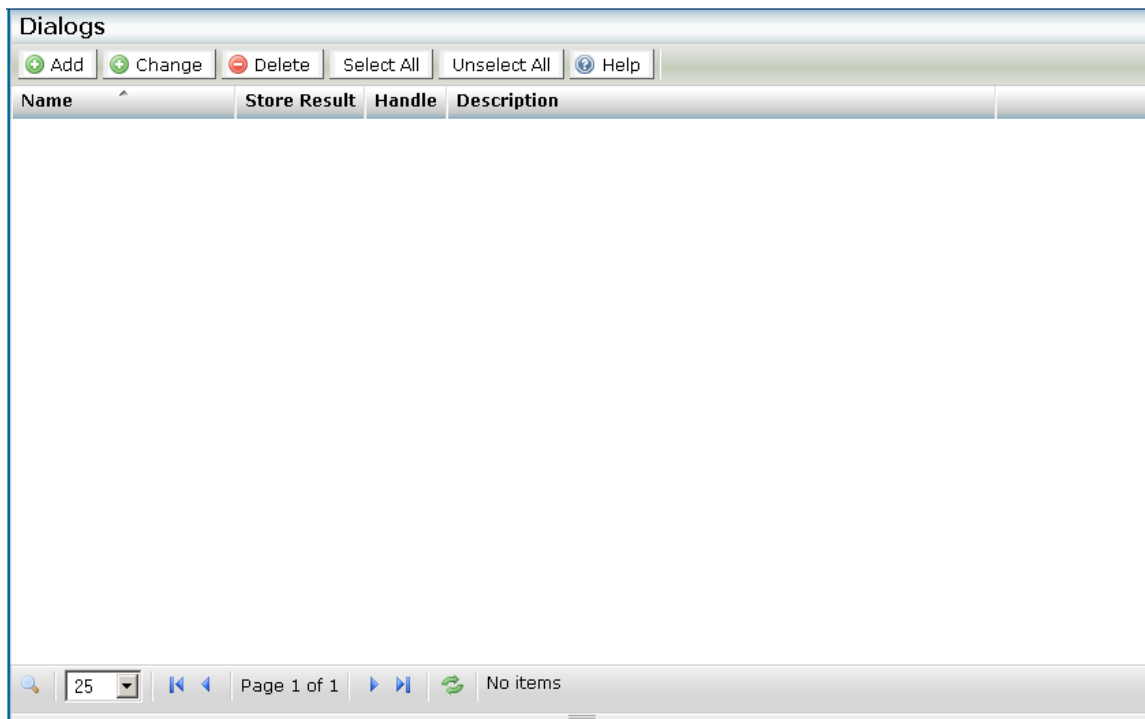
On the left of every page is the system menu for this portal. Each of the main menu headings collapses and expands vertically when clicked. This is called an accordion effect. Clicking on a different system menu will automatically collapse any open menu.

In the above image you can see that the Auto Attendant menu has been clicked and all it's sub-menus are now available.

#### 2.1.2 Grid Displays

Almost all selections from the System Menu will provide an initial listing page shown in a grid. This grid is the same for all listings. Following is an example:

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At the top of each grid are some buttons. Each of those can be clicked to provide specific functionality to the type of listing being shown. Each grid typically has a Change button to view all details and make changes, a Delete button to remove an entry, a Select All button to select all entries, an Unselect All button to deselect all selected items, and a help button to provide supplemental information about the grid.

Below the grid buttons is a column heading for each shown column. Hovering your mouse over a column will show a down arrow that can be clicked to show a list of all possible columns. From that list you can add or remove columns being shown. The following image shows the down arrow being shown on the Store Result column.



In the next image you can see that all but the ID column are being shown.



You can also change the order in which columns are displayed. In the following image you can see the result of using our left mouse and dragging the Handle column to the left of the Store Result column to change the display order.

Name	Handle	Store Result	Description
------	--------	--------------	-------------






You can also make any column's width more or less by clicking the divider on it right and dragging it. Clicking the divider draws a vertical drag line like the following image where we clicked to the right of the Store Result column:

Name	Handle	Store Result	Description
------	--------	--------------	-------------

At the bottom of every grid is a status section that looks like the following:



This status and control section is comprised of the following sections:

- A quick search button.
- A drop down showing the number of items being shown on each page. Click this to increase or decrease the number.
- The image  which tells the grid to display the first page.
- The image  which tells the grid to display the next page.
- The current page number followed by the total pages available.
- The image  which tells the grid to display the previous page.
- The image  which tells the grid to display the last page.
- The image  which will refresh the grid display.
- The first and last item being displayed in the current page and the total number of items available for display in all pages.

### 2.1.3 Terms

Throughout this document the following terms will be used. A basic understanding of these terms should be understood before proceeding further. These terms are focused on inbound calls but apply equally as well for outbound calls.

Name	Description
DB Query	A query of a database to retrieve some piece of information.
ACD	Automatic Call Distributor. This term will be referred to within this document but provisioning and management will not be discussed. ACD is a licensed module in addition to the PBX and covered in a separate document.

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Name	Description
Dialog	A collection of Call control items that together construct the logical portion of an interaction with a caller.
Digit	A number entered from a key pad on a phone.
DSN	Data Source Network. A definition of a database connection.
Email	An e-mail sent to some destination.
Greeting	One or more audio messages played to a caller after the call has been answered.
IVR	Interactive Voice Response system. A system that answers calls and interacts with a caller to provide information and services.
Language	The language, such as English, that the prompts are played in. Any language can theoretically be supported but all prompts must be recorded for that language. Also, certain languages organize some common units, like numbers or money. If using the concatenated text-to-speech Asian languages may not generate the exact phrase expected.
Message	This is the same as Prompt defined below.
PBX	Private Branch Exchange. A phone system for business that provides calling features and inter-extension dialing.
Play List	One or more audio prompts.
Prompt	The name of an audio file that can be played to a caller. The file extension is not required though allowed.
Question	A Play List that asks some question and allows the caller to respond with an answer. The answer may be a Digit or if using Speech Recognition, a word or phrase.
Recording	A Play List prompting the user to speak some message or information such as their name or address. The caller's audio is recorded into a file that can later be listened to.
Route	A place to send a call such as an extension, hunt group, ring group, voicemail box, or an ACD queue. Sending a caller to a Route is in essence, transferring the call.
Script	An IVR script that should be executed.
TTS	Text-to-speech. Synthesized speech from text.
XML	An XML message sent to some external computer with the response save for use by another Call Control item.

## 3 Preparation

### 3.1 Basic Preparation

At this point, all installation should have been completed. The system's IP address should have been set and your Ethernet network should be in place.

To make sure your PBX is on your network and functioning, please go to a PC, open a command window and type:

```
ping <pbx>
```

where <pbx> is the IP address you assigned to your PBX. You should see a response similar to this:

```
Reply from 192.168.1.13: bytes=32 time=45ms TTL=128
```

If instead you see something like this:

```
Request timed out.
```

Then there is a problem with your PBX in that it is either not connected to the same network your PC is connected to or the IP address is not what you thought. Please go back through the installation and verify the IP address and network connection.

### 3.2 Detailed Preparation

It is usually best to write down all your decisions about your configuration so that you have something to refer to when needed. Appendix A contains a complete checklist and form to help you organize your configuration information and decisions made along the way.

### 3.3 Network Settings

In order to allow your phones to use DHCP, you will need to configure your DHCP server (usually your firewall) Option 150 with the IP Static address assigned to the PBX. If your DHCP server does not support option 150, then it is best to manually configure your phones.

### 3.4 Phones

This section pertains to questions 1 and 2 on the form in Appendix A.

The first step in getting ready is to know how many VoIP telephones you want to configure and what extension range to use. Many small offices that have less than 25 people use a three digit extension number series. It is very common to see an office utilize extension numbers from 100 to 124 or 25 extensions. It is not necessary to configure all the extensions you plan to use right now as extensions can be added at any time as long as you don't exceed the maximum number of extensions allowed for the Cheetah PBX you've purchased.



Remember that the total number of VoIP phones connected to your PBX can never be more than 25.

### 3.5 PSTN Trunks

This section pertains to questions 3 and 4 on the form in Appendix A.

A PSTN trunk is a connection from your telephone service provider. The Cheetah 1000 only support analog connections and SIP trunks. Each analog connection is the same as you might have at your home and is plugged into a connector in the rear of the PBX.

A SIP trunk is connected using your Ethernet network. How many simultaneous calls you can receive or place using your SIP trunk is up to you and your SIP trunk provider.



Remember that the total PSTN trunks and calls received by your SIP trunks can never be more than 8.

## 4 Configuring the PBX


There are two ways to configure the PBX:

1. Use the PBX Wizard.
2. Use the configuration detail pages.

The PBX Wizard is by far the simplest and fastest way to configure the PBX and users are encouraged to utilize this tool for all or at least a start of their configuration.

## 4.1 Logging In

To get to the PBX Wizard, you must open a browser window and type the network name or IP address of your PBX and press the Go button or the 'Enter' key on your keyboard. You will then see a login dialog like this:



The image shows a login dialog box with a title bar that says "Please log in.". Below the title bar, there are two radio buttons for "Login Type": "User" (which is unselected) and "Administrator" (which is selected). Below the radio buttons, there are two text input fields: "User ID" containing the text "admin" and "Password" containing five blue dots. At the bottom of the dialog is a button labeled "Log In".

In this dialog you must click the Administrator radio button and enter the administrative credentials. The default is:

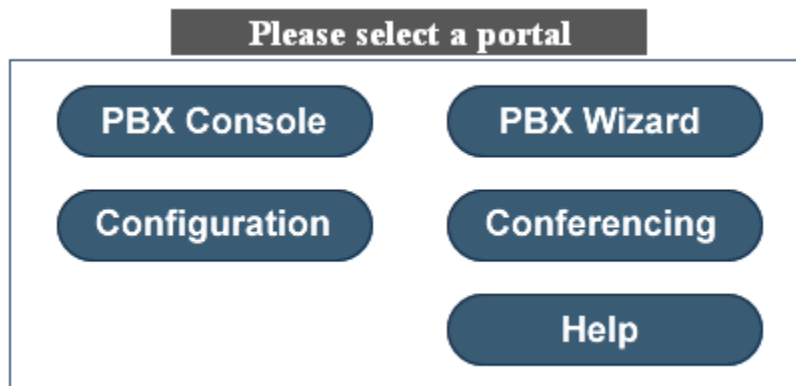
User ID: admin

Password: mypbx

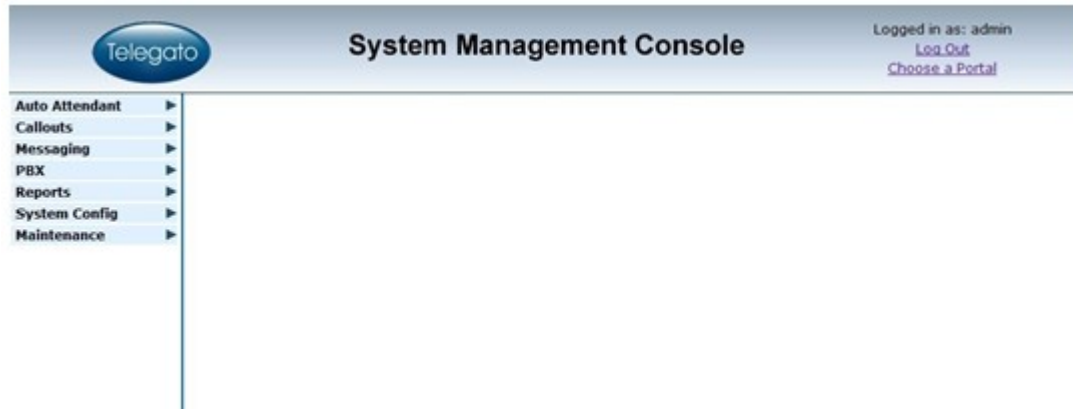
After typing the user ID and password, either click the Log In button or press the 'Enter' key on your keyboard.

## 4.2 The Administrator Portal

After you've logged in you will see the administrator's portal which looks like this:



Click the button labeled Configuration. You will now see the configuration web page which has general information at the top of the page and an accordion menu bar on the left. It looks like this:



When you are finished, you can close the web page or tab or press the Log Out link at the top right side of the page.

The accordion menu on the left shows the top level configuration categories. To open a menu category, click it. Opening any menu category will automatically close any other open category.

While the menu items are in alphabetical order, the categories will be explained in a more logical fashion.

## 5 Changing The PBX Configuration

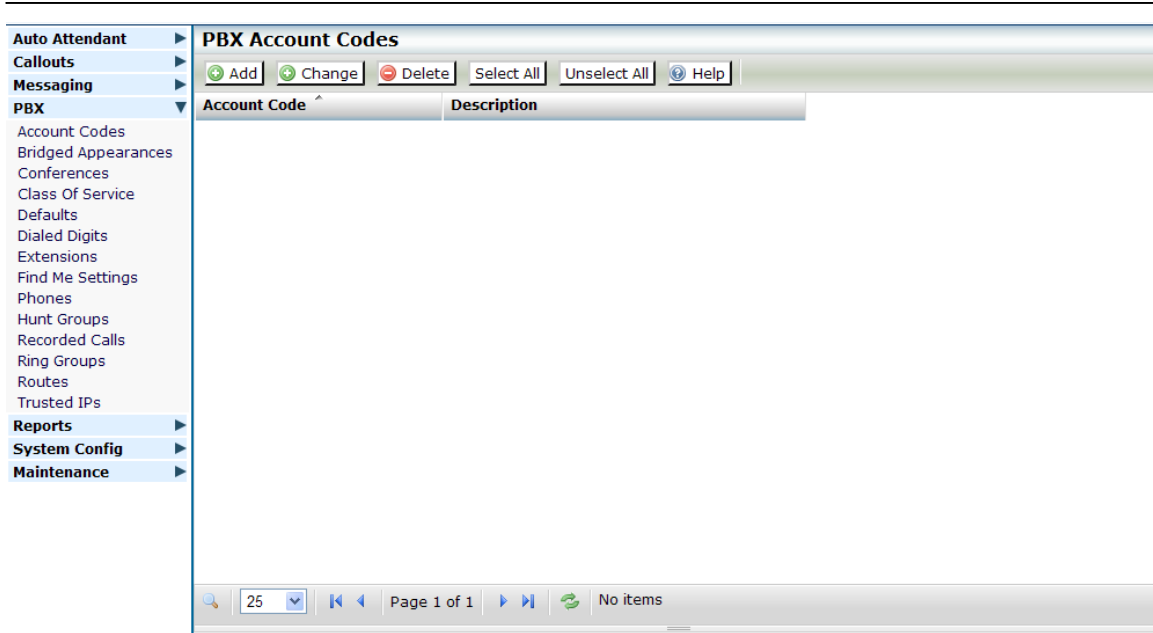
### 5.1 PBX Category

If you click the PBX menu category you will see that menu open up. It will look like this:



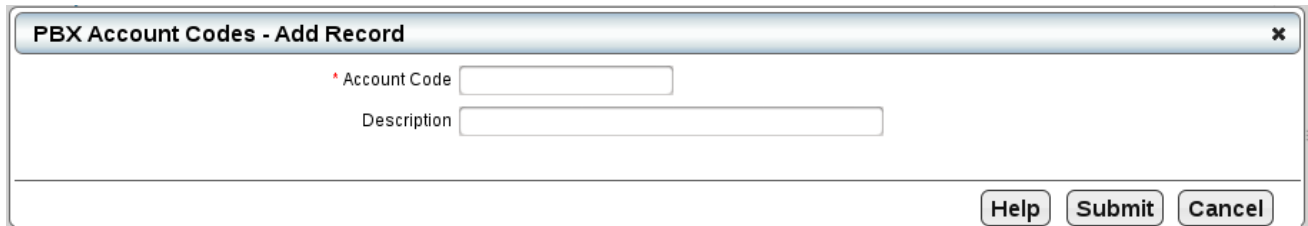
#### 5.1.1 Account Codes

To manage PBX account codes select the PBX menu and press the Account Codes sub-menu. The following image shows a sample listing for PBX account codes:



### 5.1.2 Adding an account code

To add an account code, press the Add button. The following image shows the add Account Code dialogue:



Following is an explanation of the fields in this dialogue box:

Field	Description
Account Code	Numerical/Alphabetical account code chosen by you not to exceed 16 symbols.
Description	A description of this entry.

The following example shows entering field data:

After inputting your desired account code and description, press the Submit button.

### 5.1.2.1 Editing an account code

To edit an account code, first select a row to edit then press the Change button. The following image shows the add Account Code dialogue:

After changing your desired information, press the Submit button.

### 5.1.2.2 Defaults

To manage PBX default settings select the PBX menu and press the Languages sub-menu. The following image shows a sample listing for PBX defaults:

Following is an explanation of the fields on this dialog:

Field	Description
Max Extension Digits	Maximum number of digits an extension can be
First Extension	First (lowest) extension number

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Field	Description
Music On Hold File	Default music on hold to be played
Operator Extension	Extension to be called when anyone sends a call to "0"
Announce Call Forward	Select type of calls you would like announced when forwarded
Log All Calls In	Check this box when you want to log all inbound calls
Log All Calls Out	Check this box when you want to log all outbound calls

After all values have been entered, click the Submit button.

### 5.2 Appendix A

The following form can be used to help plan you configuration:

#	Item	Answer	Help
1.	Number of phones you plan to connect now		This should be a number between 1 and 25.
2.	Number of phones you plan to connect in the future		This should be a number between 0 and 24.
3.	Number of Voice Mail boxes		This should be the number of extensions plus any additional Voice Mail boxes you want
4.	Number of PSTN trunks you plan to connect now		This should be a number between 0 and 8
5.	Number of SIP trunks you plan to have send calls to the PBX		This should be a number between 0 and 8
6.	Number of Work Group		Example: A different Work Group could be defined for sales, billing, warehouse, or any logical group of extensions that work together. Enter the Work Group names
7.	Your main greeting when a new call arrives		This should be something like "Welcome to Lenny's Pizza Parlor." Even if you don't know exactly what you want to say, pick a name for the audio file
8.	Do you want callers to be able to use dial-by-name?		Enter "yes" if you want to allow a caller to enter the first 3 letters of the called person's last or first name and hear a list of potential extensions
9.	Do you want to allow callers to press a digit, usually zero, to get connected to an attendant, secretary, or other per-		While not necessary, most callers will be annoyed if you don't give them the option to press zero or some other digit to get a

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#	Item	Answer	Help
	son that can provide general assistance in routing the call?		live person to them
10.	How many hunt groups do you want?		A hunt group will ring one extension at a time until answered to find someone to answer an inbound call. Examples of common hunt groups are for billing, sales, and customer service A hunt group can have from one to all of you extensions as members
11.	How many ring groups do you want?		A ring group will ring all extensions at the same time until answered to find someone to answer an inbound call. Examples of common hunt groups are for billing, sales, and customer service A hunt group can have from one to all of you extensions as members
12.	Do you want voice mail messages forwarded to user's email?		Some people want to listen to their voicemail even when not in the office. If you have any extensions that will utilize this feature, then you will need to acquire the details for an email account that can be used to send the voicemail messages to email
13.	Do you have any work groups that will need more than one level of main menu or need to communicate with one of your databases?		If you have a need to multiple levels of menus or need to provide information to callers that comes from one of your databases, you will need to write an IVR script. This can be complex and should only be done by trained personnel
14.	Do you have your VoIP phones?		The PBX will configure your phones for you but you will need to enter each phone's MAC address

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# Evaluation

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We hope you found this document useful, and easy to use. To help us provide you with the best documentation possible, we would like to get your feedback on this document. Please complete this form and use one of the following methods to return it to us:

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