



IXARO-Pager-System

Installation and Setup Guide
Webbased Software



A short overview	5
Advantages of a „Webapp“	5
Dynamic in the Ixaro Pager System	5
Installation of the Ixaro Pager Systems	6
Inbefore	6
System RequirementP	6
Installation with XAMPP	6
Installation on an existing infrastructure	7
First Login and further Setup	7
Starting the System	7
The first Login	8
Register new Senders	9
What type of device should I use and what should I type in the address field?	9
TelnetSender	10
FiveWattSender	10
FiveWattUSBSender	10
USBSender	11
FakeSender	11
Register new Receiver	12
TelnetReceiver	12
Logfiles	12
Transfer Logfiler	12
Error Logfile	12

A short overview

The Ixaro Pager System is a browser supported system, which helps gatekeepers to maintain the resources like gates and pagers more properly, messages for example can be sent in an easy and fast way. Moreover the systems records various kind of events and actions.

All in the background collected information can be easily exported as csv file, a format which is perfectly easy for further usage and can be read by popular tools like Microsoft Excel.

Advantages of a „Webapp“

The Ixaro Pager System runs as 'webapp' in a Servlet Container like Tomcat. As a result, a Webserver is required. The users can access the service with a browser - just like a normal website. The advantages are also known from cloud-computing.

- **Everything, but only once:** The System has to be installed only once - afterwards (depending on the server settings) all clients in the same network can use the new service. Updates are also installed only once.
- **Centralized Data:** All created data is stored in a MySQL database, even if the system would crash, all collected data is safely stored in the database. This setup also provides consistent data for all the users.
- **Access from everywhere:** User can access the service with traditional computers but also with other devices like smartphones and tablets, a traditional browser and connection to the server will do it.

Dynamic in the Ixaro Pager System

The Ixaro Pager System can be adapted to the customer's wishes. Almost all labels and textfields in the user interface can be changed by a simple language file.

Further dynamic is in the possibility to mix different kinds of senders and receivers, all combinations can work perfectly together. Different kinds of hardware protocols are handled by the software..

Installation of the Ixaro Pager Systems

Inbefore

To run the Ixaro Pager System, an Apache Server with Tomcat container and a SQL Database is required. Therefore the installation process is more about the Server setup. If you want to install only the Ixaro Pager System itself on your existing infrastructure, have a look at the following section 'Installation on an existing infrastructure'.

To offer an easy and fast way to get started, we use 'XAMPP' (<http://www.apachefriends.org/en/xampp.html>), which is free available on the internet. It contains all required servers for the Ixaro Pager System. Please notice that we have minor changes in the configuration of ,our' XAMPP package, to rise the level of security and to make the installation easier.

System Requirements

The Server needs to run MS Windows XP/Vista/7/8 or Windows Server 2003 or higher. Moreover a Servlet-Container is mandatory (If you don't have one, go for chapter 'Installation with XAMPP'). On the Client, a Browser with activated JavaScript is necessary. In general the latest version of Mozilla 3

Firefox, Google Chrome and MS Internet Explorer works best. Internet Explorer should be Version 8 at least..

Installation with XAMPP

„Installation mit XAMPP“ ist die einfachere Installation, da alles vorkonfiguriert wurde. Apache, MySQL sowie Tomcat werden direkt mit installiert. Damit die Software einfach „kopiert“ werden kann, wird die portable Version von XAMPP benutzt.

1. Ensure that Java is installed on the computer that will operate as server, if this is not the case, you can obtain Java for free here: <http://www.java.com/en/download/> (suggestion: Use Java in 64 Bit)
2. Extract xampp.rar off the folder „Ixaro Pager System – Installation package/Files for installation with XAMPP/“to your computer. The file path is variable, but it must be in the root folder of the partition. XAMPP is usually installed on „C:/“. To extract the package, you can use the tool winrar (<http://www.winrar.de/>).
3. Navigate to the in (3) created folder „C:/xampp/“ and execute the file setup_xampp.bat
4. Add the key file (the file with the MAC address as file name), which you got from Ixaro and copy it to the folder „C:/xampp/“. This will activate your Ixaro Pager System.

Installation on an existing infrastructure

All bold printed paths and files are within:

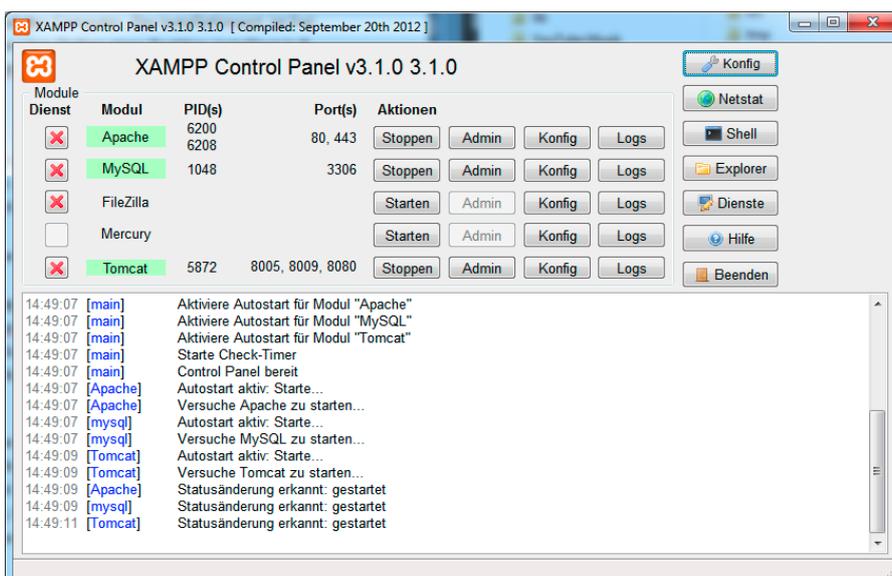
„Ixaro Pager System – Installation package/Files for Installation on existing Infrastructur/“

1. Move the file ixaropagersystem.war to the „webapps“-Folder of your servlet container.
2. Copy all files from „/root files/“ in the root folder of your web server.
3. In your MySQL DBMS, create a new database called ‘ixaro’, afterwards import the file ixaro.sql
4. Start your web server, the file ixaropagersystem.war from (1) will be extracted to a folder in the same directory automatically.
5. From your Servlet Container, navigate to the folder /webapps/ixaropagersystem/WEB-INF/classes/ and open the file hibernate.cfg.xml. adapt the properties „asconnection.url!“ to the one of your SQL Server and „connection.username“ such as „connection.password“ to those of a user in your DBMS (read and writing rights for the ixaro database are required).
6. Add the key file (the file with the MAC address as file name), which you got from Ixaro and copy into your web server’s root folder. This will activate your Ixaro Pager System.

First Login and further Setup

Starting the System

To run the system, simply start the services “Apache”, “MySQL” and “Tomcat”. If you chose to use XAMPP, you can therefore use the program xampp-control.exe (inside the “xampp/” folder). Please notice that the ports 80, 8080 and 3306 need to be unused, programs like Skype and MSN Messenger may occupy required ports.



The XAMPP Control Panel with running services

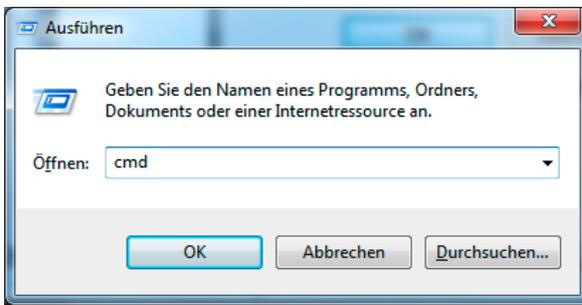
The first Login

To get to the Ixaro Pager System, type the following URL in your browsers address bar:

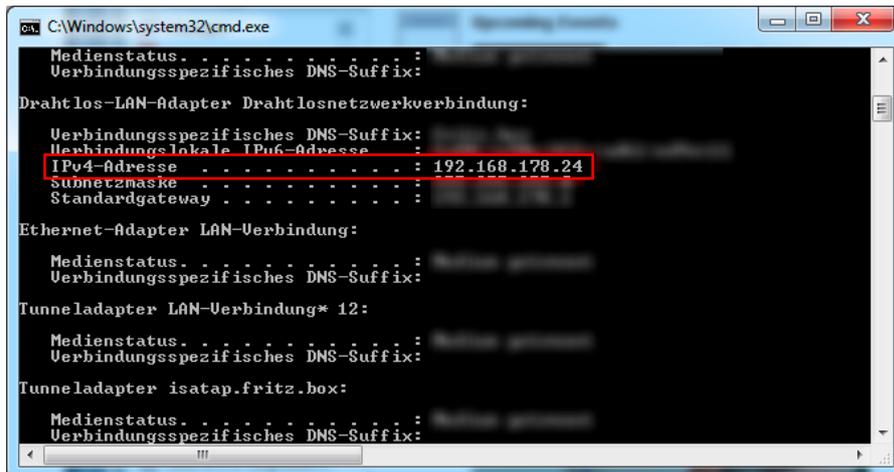
`http://[Address of your servers]:8080/ixaropagersystem/index.html`

Please notice the placeholder [Address of your server], this has to be replaced by the actual address (an IP address for example).

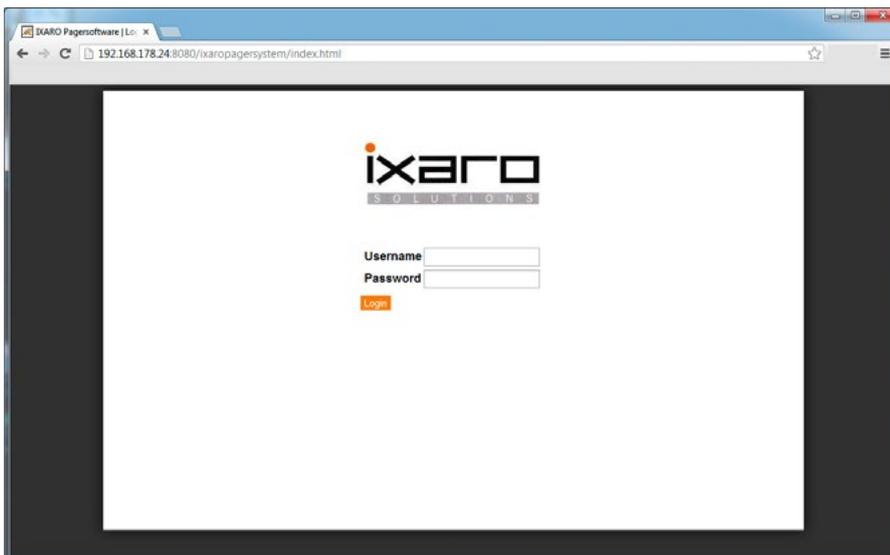
You can determine the IP address by pressing Windows key + R. In the new windows type 'cmd' and a second, black window will appear.



In the black window, type 'ipconfig', you can read your IP address in the new generated textblock.



So, the actual link for this example would be: `http://192.168.178.24:8080/ixaropagersystem/index.html`



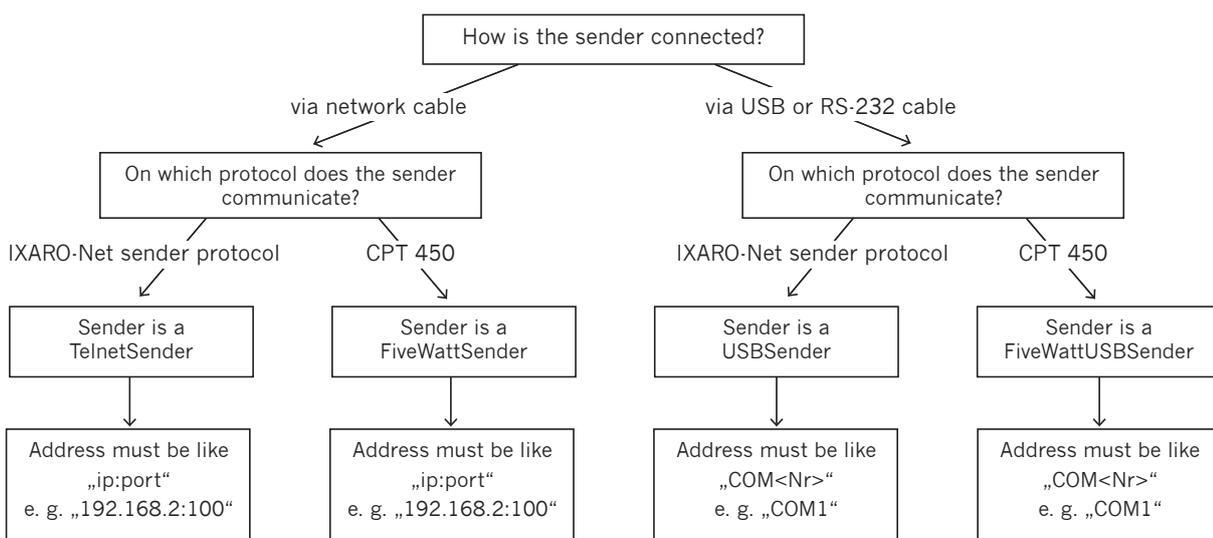
To login, use the initial administrator account 'admin' with the password 'ixaro'. It is recommended to change the default password as soon as possible.

Register new Senders

Note: Depending on the sender hardware there may be other configurations to do. These configurations are not related to the Ixaro Pager System. To register a sender, some information is required. Beside an ID there are address and type of the device. Some senders don't have an ID, you can choose any ID for them as long as it is unique.

What type of device should I use and what should I type in the address field?

There are 4 types of senders and 1 type of receivers. It is important to choose the right type for the senders, because it influences the way the system communicates with them. To determine the correct type, just follow the decision tree below.



Name	Interface	Protocol
USBSender	COM Port	IXARO-Net Sender Protokoll
FiveWattUSBSender	COM Port	CPT450
TelnetSender	Telnet	IXARO-Net Sender Protokoll
FiveWattSender	Telnet	CPT450

TelnetSender

Senders which are connected via network are “TelnetSender” (exception: “5-Watt Sender”). In the address field goes the IP address and the port of the senders Telnet server, both separated with “:”. A valid address would be: „192.168.2.142:100“

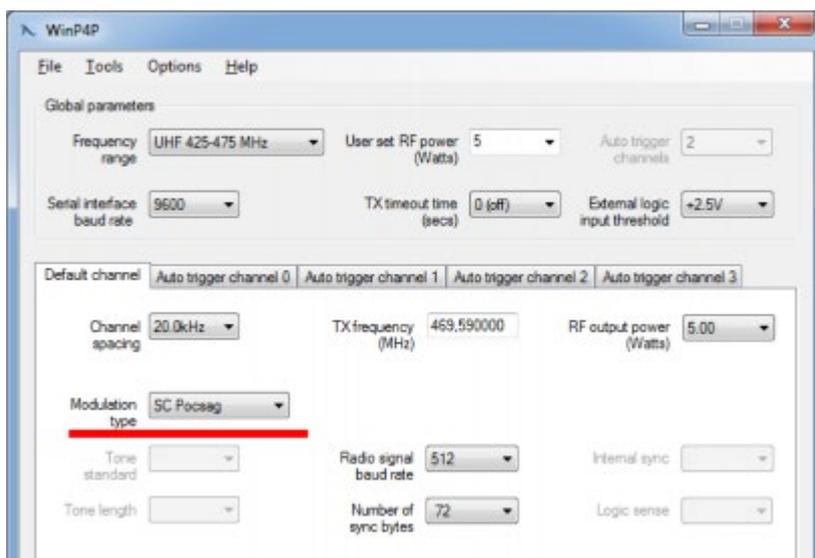
FiveWattSender

This sender is connected via network, but it works with another protocol and because of this, it has to be an own type of sender. The address format is the same as for TelnetSender. A valid address would be: „192.168.2.142:100“

FiveWattUSBSender

This sender is connected via USB, but it works with another protocol and because of this, it has to be an own type of sender. The address format is the same as for USBSender. A valid address would be: „COM3“

Important: When setting up the Sender, make sure that the Field ‚Modulation Type‘ is set to ‚SC PCSAG‘ (see Screenshot below)



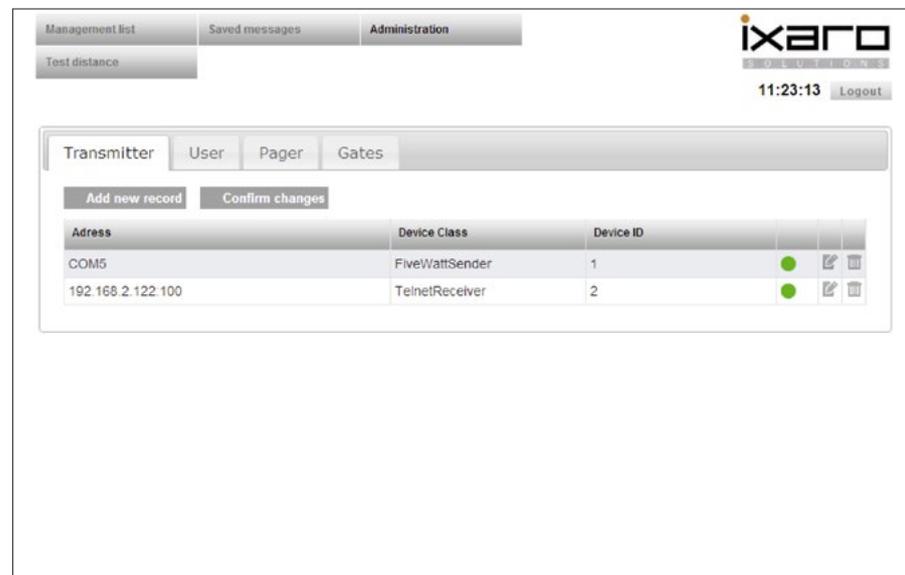
USBSender

Senders which are connected via USB are “USBSender” (exception: “5-Watt USB Sender”). In the address field goes the COM-port of the senders. A valid address would be: „COM3“

FakeSender

A test sender. This sender is virtual and doesn't actually send messages. It can be used for testing.

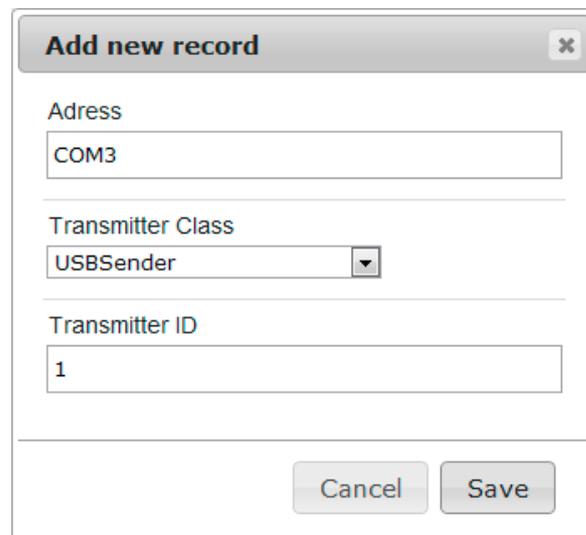
Some proper configured senders



The screenshot shows the Administration page of the Ixaro Solutions web interface. At the top, there are navigation tabs for 'Management list', 'Saved messages', and 'Administration'. Below these are buttons for 'Test distance', 'Add new record', and 'Confirm changes'. The main content area displays a table with the following data:

Address	Device Class	Device ID		
COM5	FiveWattSender	1	●	✎ ✖
192.168.2.122.100	TelnetReceiver	2	●	✎ ✖

Window for adding a new sender



The 'Add new record' dialog window contains the following fields and controls:

- Address:** Text input field containing 'COM3'.
- Transmitter Class:** Dropdown menu with 'USBSender' selected.
- Transmitter ID:** Text input field containing '1'.
- Buttons:** 'Cancel' and 'Save' buttons at the bottom.

Register new Receiver

To get the advantages of 2-Way Paging, it is required to have at least 1 receiver.

TelnetReceiver

Receivers which are connected via network are "TelnetReceiver". In the address field goes the IP address and the port of the senders Telnet server, both separated with ":". A valid address would be: „192.168.2.142:100“

Logfiles

There are 2 kinds of logfile:

Transfer Logfile

This logfile stores all actions by the user. These are things like transfer times, waiting times and information about the incoming trucks. Further information about this log:

- The logfile is a csv file, this format can be read by Microsoft Excel. The columns are: Database ID, Driver, Company, Licence Plate, Freight, Last Message, Gate, Pager, Time of Arrival, Time of Loading, Departure, Duration Overall
- A logfile always covers 24h. The reference date to bind logfiles to a day is the column Arrival
- Each day's logfile will be created automatically, this always happens between 0:00 and 1:00 on the next day..
- A user has also the option to download the logfile for the current day; this has no influence to the automatic logfile creation.
- Each logfile has the date which it covers as file name. The logfile for 21. Dec 2012 would have the name 20121221.csv
- The default location for logfiles is `/xampp/tomcat/logs/`. This can be changed in the file `Datei/xampp/ixaropagersystem.properties` by editing the property `logfileLocation` (The new location must exist to this point; no folders will be created automatically). The changes will apply after Tomcat has been restarted..

Error Logfile

This logfile stores intern errors and events. It is not relevant for normal usage, but can be helpful for further developments and support..

- By default the logfile is stored here: `\xampp\tomcat\logs\IxaroPagerSystem.log`. You can change the location by changing the "value" of the File property inside this file: `\xampp\tomcat\webapps\ixaropagersystem\WEB-INF\classes\log4j.xml`