USER'S MANUAL

Plipbox Deluxe

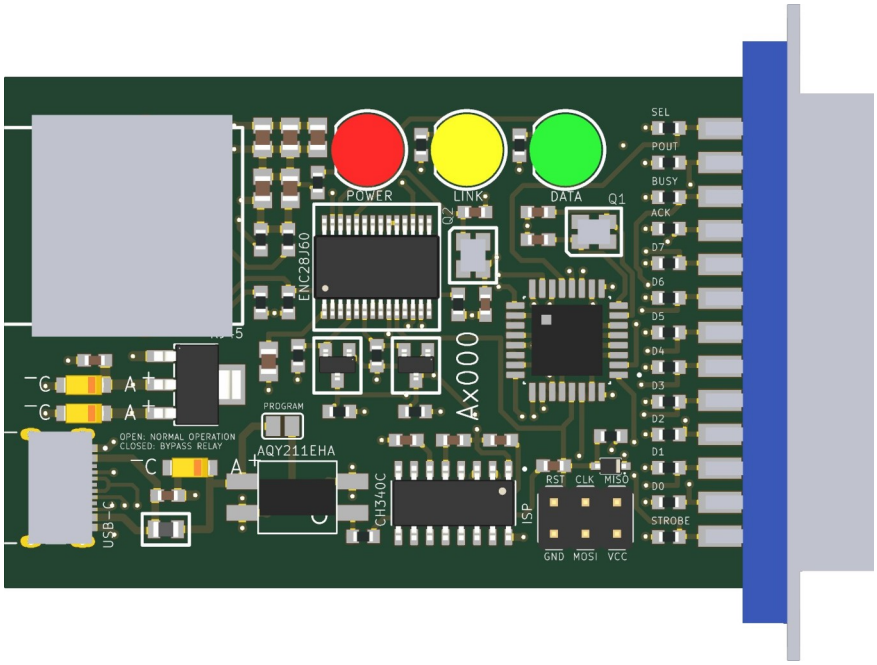
Ethernet Adapter for the Amiga Parallel Port

The Plipbox Deluxe connects the Amiga to an Ethernet network via the parallel port. AmigaOS accesses it through the SANA-II driver plipbox.device, which works with all common TCP/IP stacks, e.g. Roadshow, AmiTCP or Miami. The Plipbox is based on the project by Christian Vogelgsang.

1 FEATURES

* 10 Mbit/s Ethernet (ENC28J60) with RJ45 connector
* Firmware 0.6 with burst mode for higher data rates
* Three indicators: POWER (red), LINK (yellow), DATA (green)
* USB-C for power supply and firmware updates

2 LAYOUT



Board of the Plipbox Deluxe (without case)

Indicator / connector	Meaning
POWER (red)	The Plipbox is powered.
LINK (yellow)	Network cable is connected and linked.
DATA (green)	Network traffic.
RJ45	Network connector
USB-C	Power supply (5 V) and firmware update
PROGRAM	Jumper: open = normal operation, closed = relay bypassed (only for firmware updates via USB)
DB25	Connector for the Amiga parallel port

CAUTION: The Amiga parallel port supplies only about 10 mA. The Plipbox therefore always needs an external 5 V USB power supply, e.g. a mobile phone charger.

3 INSTALLING THE DRIVER

Copy the matching driver file from the floppy disk (folder Plipbox#1) as plipbox.device to Devs:Networks. If the Networks folder is missing, create it first with MAKEDIR Devs:Networks.

CPU	File
68000, 68010	plipbox.device_RELEASE_000
68020, 68030	plipbox.device_RELEASE_020
68040, 68060, Vampire	plipbox.device_RELEASE_040

```
COPY DF0:Plipbox#1/plipbox.device_RELEASE_020 Devs:Networks/plipbox.device
```

Then set up the TCP/IP stack, see «Setting up the TCP/IP Stack».

3.1 Burst Mode

The burst mode of firmware 0.6 does not work with every Amiga. For the first setup, it is recommended to disable it and to try it again only once the connection works. Disable it in the Shell, then reboot:

```
MAKEDIR ENVARC:sana2
ECHO NOBURST >ENVARC:sana2/plipbox.config
```

The file plipbox.config must contain only the line NOBURST. Deleting the file re-enables burst mode.

3.2 Several Plipboxes on the Same Network

All Plipboxes share the same MAC address from the factory; the driver transfers its own address at startup. Use the driver from folder Plipbox#1 for the first Plipbox on the network, the one from Plipbox#2 for the second, and so on.

> **CAUTION:** Never use the Plipbox with an ordinary gender changer on the Amiga 1000 (or an A1000 Plipbox on other models). This can destroy the hardware. For the Amiga 1000, a dedicated version with a matching connector or the A1000 Parallel Adapter is available.

4 SETTING UP THE TCP/IP STACK

The driver alone does not get the Amiga onto the network; a TCP/IP stack is needed as well. Roadshow and MiamiDX have proven themselves.

4.1 Roadshow

Roadshow (roadshow.apc-tcp.de) runs on AmigaOS 2.04 or higher, even on a 68000 with 2 MB of memory. The free demo version disconnects after 15 minutes; the full version has no time limit and is optimised for 68020 to 68060. Roadshow is configured with text files.

1) Install Roadshow with its installer.
2) In the Shell, copy a template as the interface file for the Plipbox:

```
COPY SYS:Storage/NetInterfaces/cnet DEVS:NetInterfaces/plipbox
```

Open the file DEVS:NetInterfaces/plipbox in a text editor (e.g. ED) and replace its contents with these lines:

```
device=plipbox.device
configure=dhcp
downgoesoffline=yes
```

With configure=dhcp, the Amiga gets its address, gateway and DNS servers from the router. For a fixed address, enter address=... and netmask=... instead and specify the DNS servers in DEVS:Internet/name_resolution. After a reboot, Roadshow brings the Plipbox online by itself. To start and stop it manually:

```
ADDNETINTERFACE DEVS:NetInterfaces/plipbox
NETSHUTDOWN
```

4.2 MiamiDX

MiamiDX by Holger Kruse is configured through a graphical user interface. It requires a 68020 or faster and MUI 3.8 or newer; on an Amiga with a 68000, use Roadshow instead. The two archives comm/tcp/MiamiDx10cmain and comm/tcp/MiamiDx10c-MUI are needed from Aminet.

1) Unpack both archives, install MiamiDX with Install_MiamiDx and start it.
2) «Hardware» tab, «New»: select type «Ethernet», name plipbox, type «SANA II», driver DEVS:Networks/plipbox.device, confirm with «Ok».

3) «Interfaces» tab, «New»: type «Ethernet», connection «LAN», hardware plipbox. For IP, netmask and gateway select «dynamic» (DHCP) or enter fixed values. Leave «Multicast» disabled; the Plipbox does not support it.
4) With DHCP, also fetch the DNS servers via DHCP under «TCP/IP Settings». With fixed values, enter the DNS servers in the «Databases» tab under «DNS servers».
5) Save with Amiga+S (menu «Settings», «Save») and connect with «Online».

5 WEB BROWSER

IBrowse 3 is recommended for browsing the web (www.ibrowse-dev.net). IBrowse is shareware: it can be downloaded free of charge and runs in demo mode without registration. Requirements:

* AmigaOS 3.x and a 68020 CPU or faster
* MUI 3.8 or newer, MUI 3.9 is recommended
* AmiSSL 5 for encrypted pages (HTTPS)
* a running TCP/IP stack, e.g. Roadshow or MiamiDX

1) Install MUI if it is missing (Aminet) and reboot the Amiga.
2) Download AmiSSL 5 from www.ibrowse-dev.net and install it with its installer.
3) Download IBrowse 3, unpack it and install it with Install-IBrowse, selecting the version that matches the CPU. If IBrowse is registered, copy the key file into the IBrowse directory.
4) Start the TCP/IP stack and open IBrowse.

Many of today's websites are too demanding for an Amiga. Simple pages with little JavaScript work well, e.g. aminet.net, whdownload.com, etc.

6 TROUBLESHOOTING

Symptom	Remedy
Red indicator does not light	Connect the USB power supply or try another power supply.
Yellow indicator does not light	Check the network cable and switch.
Connection drops or hangs	Disable burst mode (NOBURST).
Network problems with several Plipboxes	Use the driver from a different Plipbox#n folder for each Plipbox.
Driver does not start	Choose the driver file matching the CPU and save it as plipbox.device.

7 SOURCES

Project and documentation: github.com/cnvogelg/plipbox