Twin DB-800 receiver

Features:
The device receives DVB-S/S2 signal, descrambling CAS – services and transmit a transport stream (up to five services, not more then 25 Mb) to IP-output of receiver; Manage and complete information about the state of the receiver on WEB

Options:

Input frequency	950 … 2150 MHz
Input signal level	-65 … -25 dBm
S/N	Not less than 7 dB
Input impedance	75 Ohm
Demodulation	QPSK /8PSK
Input transponder symbol rate	1 … 45 Мсимв/с (QPSK) 1 … 37 Мсимв/с (8PSK)
Max operation service symbol rate	45 MB
FEC	1/2, 2/3, 3/4, 5/6, 7/8 (QPSK) 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 7/8, 8/9, 9/10 (8PSK)
Videocompression type	MPEG-2/4
Trophy-Access embedded decryptor	In order
Operating temperature	0°C … 45°C
Supply voltage	12V

Interfaces

Input interface	Ethernet 100BASE-T
Control interfaces	Ethernet 100BASE-T
Input connector	F - connector
Output connector	RG45

All changes to the DB-800 settings are made through an FTP client, using FAR MANAGER and TOTAL COMMANDER. To do this, go to the DSC-01 from the network or by connecting a monitor and keyboard.

We go to the DB-800 via FTP:
enter the destination address in the form: root@10.10.10.124 [Enter]
login: **root**
Password: **dreambox**
Find the desired file and press [F4].
After making changes, do not forget to save [F2].

- DB-800 receiver and BISS encryption.

Keys file use for this situation.

Keys file is placed in a folder with the setting of the OSCAM: **/etc/tuxbox/config**
Nane of the file is **oscam.keys**. We enter into this file the needed keys.

For example, keys for BISS decryption has format:

F <SID of channel><Video PID of channel> 00 <key>

F <SID of channel ><Video PID of channel> 01 <key>

Channel SID and Video PID you can see here: **http://www.lyngsat.com**

For example, for TET channel (4.8°E) (http://www.lyngsat.com/astra4a.html)

SID-VPID => 6110 and 6111 (in decimal system)

You need to convert these numbers into HEX system: 6110 & 6111 DEC => 17DE & 17DF HEX

Thus, you should write into file:

F 17DE17DF 00 xxxxxxxxxxxxxxxx

F 17DE17DF 01 xxxxxxxxxxxxxxxx
You should wrine official BISS key instead.

If you'll write 1FFF instead "Video PID of channel", it will be right.
For example:

F 17DE1FFF 01 xxxxxxxxxxxxxxx

F 19781979 00 1A1A1A001A1A1A00 ;1 auto ua (4.8E)

F 19781979 01 1A1A1A001A1A1A00 ;1 auto ua (4.8E)

F 00011FFF 00 CBA987FB654321C9 ; TV Canaria tonytr 2008-05-14 02:06:36

F 00011FFF 01 CBA987FB654321C9 ; TV Canaria tonytr 2008-05-14 02:06:36

F 17ED1FFF 00 1A2B3C814D5E6F1A ; 1+1 International ricky 2011-06-11 22:30:09

F 17ED1FFF 01 1A2B3C814D5E6F1A ; 1+1 International ricky 2011-06-11 22:30:09

F 17e817e9 00 0902190063230600 ;2+2

F 17e817e9 01 0902190063230600 ;2+2

- DB-800 receiver and conditional access card.

You enter into **directory /usr/bin** and you must to edit **streamts.sh** scrypt.
You must comment out (# symbol) the lines:

```
#!/bin/sh
if [ ! -e /var/keys ] ; then
    ln -s /etc/keys /var/keys
fi
killall camd3
killall oscam
killall streamts
sleep 3
#/usr/bin/camd3
/usr/bin/oscam -b
sleep 2
/usr/bin/streamts

#/var/bin/fbiss,
#/usr/bin/oscam -b
```

And you must to remove the comment in line:

/var/bin/camd3
or you must to add the line, if line is not..

Save the file.

It are files into /var/keys directory:

camd3.config

```
BOXTYPE=4
HTTP_PORT=9080
HTTP_ADMIN=admin
HTTP_PASSWORD=camd3
DESCR_DELAY=500
SLOT=/dev/sci0:2:1:1:1:999:slotunten:password3 # server
```

camd3.filter

```
0500:023700:FFFF:FFFF:1:1
```

camd3.ignore

```
0500:020710:FFFF:FFFF
0500:040600:FFFF:FFFF
0500:030600:FFFF:FFFF
```

camd3.servers

```
#cs357x://dm1:dm1:SERVICES=/var/keys/camd3.filter@10.10.10.100:20248 #client
```

camd3.users

```
dm1:dm1:SERVICES=/var/keys/camd3.filter
```

This is example for camd3 configuration for **local** encryption of the services and for keys distribution on the network. Distribution conducted using filtering of non-23700 idents.
Client configuration differs only in the absence of # symbol into the first position of the camd3.servers file. You can see IP address of receiver (10.10.10.100, conditional access card is inserted), where camd3 is launched into configuration of the server of the keys.

How to replaced IP-address of DB-800.

You can to correct **/etc/network/interfaces** file

```
auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
        address 10.10.10.242
        netmask 255.255.255.0
        gateway 10.10.10.1
```

and replaced 10.10.10.242 by the address that you want to install into DB-800, you can replaced gateway address 10.10.10.1, if necessary.

- DB-800 receiver management via dvbserver configuration files

<tuner> Top section
Dreambox 224 name of the DB-800 receiver (only used for logging).
TunerIP 10.10.10.224 ip address of receiver.
ServerIP 10.10.10.11 ip address of interface to which the receiver will send the data (just ip on eth0). This option can be specified once in the root config file section.

Freq 12241 27500 3/4
Freq 12241 27500 3/5 S2-8PSK S2-8PSK or S2-QPSK modulation
| | FEC (1/2, 2/3, 3/4, 5/6, 7/8) for DVB-S
| | FEC (1/2, 2/3, 3/4, 5/6, 7/8, 3/5, 4/5, 8/9, 9/10) for DVB-S2
| Symbol rate
transponder frequency in MHz

<service>
Stream 0x283D ntv It is NTV channel, which Dreambox 224 processed
Remap 0x310
Out 1
Encrypt 1
<service>

Encrypt 1 the presence of an encryption at the output of headend (default is 0- open program, 1 – 3 - closed the program, an encoding algorithm 1, 2 or 3). When using Algorithm 2 subscriber receivers on this channel include parental control.

LNB 10600 LNB LO frequency in MHz (default is 10600)
Out 0 serial output, as described previously <Output> directive
LNBI 1 power and meander management at the receiver input

LNBI 0 - power is off
LNBI 1 - 13V/0kHz
LNBI 2 - 18V/0kHz
LNBI 3 - 13V/22kHz
LNBI 4 - 18V/22kHz

Stream 0x11 "Dreambox 224"
| Name of the stream (only used for logging)
SID of programs from the satellite.

Remap 0x300
base PID for program PID remaping.

DubIP 239.1.1.6 eth3 11111
This parameter is used for multicast or unicast IP broadcast organization

239.1.1.6 multicast group or unicast address
eth3 in the case of multicast, the output interface through which IP traffic is sent

11111 destination port

DubTTL 16 TTL applies in the case of multicast broadcasting

</ Tuner> end of section

<Output>
id 0 Number of output
#

OutAddr 192.168.1.200 222
Destination address and port

PacketSize 380
Packet size

</ Output>

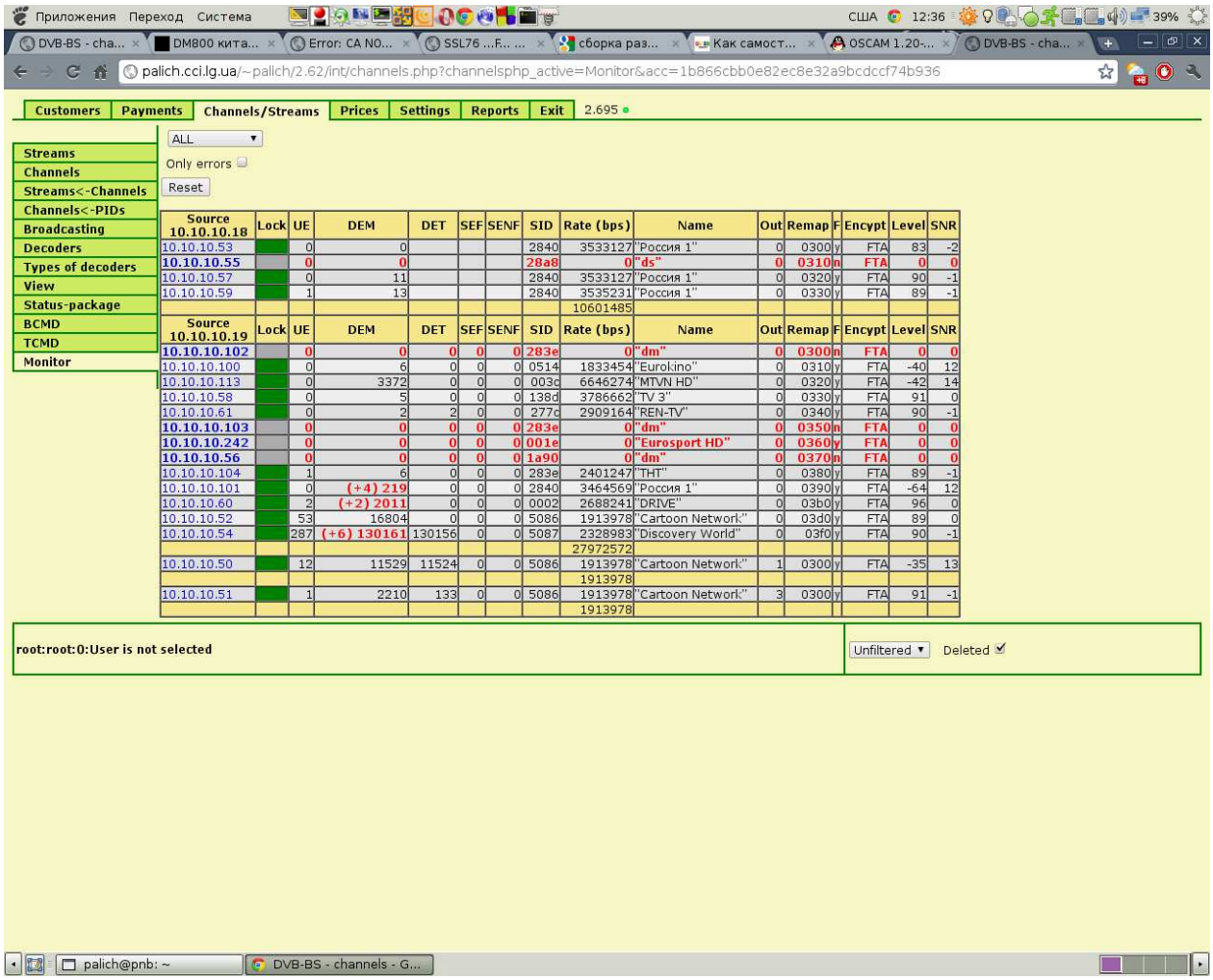
<Tuner>
Dreambox224
TunerIP 10.10.10.223
ServerIP 10.10.10.11
Freq 12242 27500 3
LNB 10600
LNBI 1
<service>
stream 0x283D ntv
Remap 0x310
Out 1
encrypt 1
</service>

<service>
stream 0x283E tnt
Remap 0x330
Out 1
encrypt 2
</service>
</Tuner>

- Monitoring of the DB-800 receivers

Go to the statistics server address: 10.10.10.254.
Login: **aj**
Password: **aj**
We recommend to replace the name and password confidential.
Open the "Channels / streams" and MONITOR menu item.

You can see the IP-address table and receivers current state, namely



Source 10.10.10.18	Lock	UE	DEM	DET	SEF	SENF	SID	Rate (bps)	Name	Out	Remap	F	Encypt	Level	SNR
10.10.10.53		0	0				2840	3533127	"Россия 1"	0	0300	y	FTA	83	-2
10.10.10.55		**0**	**0**				**28a8**	**0**	**"ds"**	**0**	**0310**	**n**	**FTA**	**0**	**0**
10.10.10.57		0	11				2840	3533127	"Россия 1"	0	0320	y	FTA	90	-1
10.10.10.59		1	13				2840	3535231	"Россия 1"	0	0330	y	FTA	89	-1
								10601485							
Source 10.10.10.19	**Lock**	**UE**	**DEM**	**DET**	**SEF**	**SENF**	**SID**	**Rate (bps)**	**Name**	**Out**	**Remap**	**F**	**Encypt**	**Level**	**SNR**
10.10.10.102		**0**	**0**	**0**	**0**	**0**	**283e**	**0**	**"dm"**	**0**	**0300**	**n**	**FTA**	**0**	**0**
10.10.10.100		0	6	0	0	0	0514	1833454	"Eurokino"	0	0310	y	FTA	-40	12
10.10.10.113		0	3372	0	0	0	003c	6646274	"MTVN HD"	0	0320	y	FTA	-42	14
10.10.10.58		0	5	0	0	0	138d	3786662	"TV 3"	0	0330	y	FTA	91	0
10.10.10.61		0	2	2	0	0	277c	2909164	"REN-TV"	0	0340	y	FTA	90	-1
10.10.10.103		**0**	**0**	**0**	**0**	**0**	**283e**	**0**	**"dm"**	**0**	**0350**	**n**	**FTA**	**0**	**0**
10.10.10.242		**0**	**0**	**0**	**0**	**0**	**001e**	**0**	**"Eurosport HD"**	**0**	**0360**	**y**	**FTA**	**0**	**0**
10.10.10.56		**0**	**0**	**0**	**0**	**0**	**1a90**	**0**	**"dm"**	**0**	**0370**	**n**	**FTA**	**0**	**0**
10.10.10.104		1	6	0	0	0	283e	2401247	"ТНТ"	0	0380	y	FTA	89	-1
10.10.10.101		0	(+4) 219	0	0	0	2840	3464569	"Россия 1"	0	0390	y	FTA	-64	12
10.10.10.60		2	(+2) 2011	0	0	0	0002	2688241	"DRIVE"	0	03b0	y	FTA	96	0
10.10.10.52		53	16804	0	0	0	5086	1913978	"Cartoon Network"	0	03d0	y	FTA	89	0
10.10.10.54		287	(+6) 130161	130156	0	0	5087	2328983	"Discovery World"	0	03f0	y	FTA	90	-1
								27972572							
10.10.10.50		12	11529	11524	0	0	5086	1913978	"Cartoon Network"	1	0300	y	FTA	-35	13
								1913978							
10.10.10.51		1	2210	133	0	0	5086	1913978	"Cartoon Network"	3	0300	y	FTA	91	-1
								1913978							

LOCK SAT signal LOCK indicate.
GREEN is LOCK on,
RED is LOCK off,
GREY. Receiver is not available for monitoring

UE (UNLOCK ERRORS) Amount of signal loss since the last power-up

DEM (DISCONTINUOUS ERROR of MULTIPLEXER) Loss of signal at multiplexer input

DET (DISCONTINUOUS ERROR of TUNER) Loss of signal at receiver output. Thus, if there is a difference between the DEM and DET values, you need to look for problems in the headend Ethernet network.

SEF Data sinchronization errors into receiver. If it is not zero receiver is defective.

SID (SERVICE ID) – Satellite channel SID

RATE Bit rate of the service. The table also indicates the total service rate of transponder.

NAME Name of channel (display on subscriber receiver).

OUT DSC-01 Ethernet output numder (0…4)**.**

REMAP Service PID on the Headend output.

F Found or not in the satellite signal the SID from configuration file (Y- yes, N- no).

ENCRYPT Free or not free signal on the Headend output.

LEVEL Satellite signal level on the receiver input (% or dBm).

SNR Signal to noice rate at the receiver input.