S2M Bridge

Manual V97/1.30-EURO

- Technical alterations are subject to change without further notice -

Description

With the S2M-Bridge up to 15 x 128 kbps connections or up to 30 x 64 kbps connections can be realised simultaneously. The connection is established either centrally by a control PC or the individual MusicTAXIs call the bridge directly.

When a MusicTAXI calls the bridge only the main number of the S2M connection has to be dialled without adding the extension numbers, i.e. all MusicTAXIs use the same ISDN number to establish a connection to the bridge. For the calling unit, the basic-rate-access/Telcom network must provide the service: transmitting the calling number to S2M bridge side. If a connection is to be established in 128 kbps, both B channels have to be called with the same number.

In comparison to the MusicTAXIs, the S2M-Bridge has a reduced command set for the control via PC. For the remote control the commands CONnect, DISconnect and GET STAT have to be used. Furthermore the connection charges can be interrogated by GET CHRG, and the ISDN number of the partner unit by GET NUM.

The remote ports are controlled with 9600 Baud, 8N1. Neither hardware nor software handshakes are supported.
All commands have to be confirmed with CR/LF.

Remote Commands

Mode Setting:

CFG xxx

xxx	064	Bridge to work at 64 kbps
	128	Bridge to work at 128 kbps

Additional figures after the commands are ignored to realise a parallel control of bridge and MusicTAXI. Change of mode is not possible during an established connection!

Connection Establishment:

CON xx y ISDN1 ISDN2

xx	Input of port number in hex. Legal values from 01 to 0F (1 to 15).
y	Number of B channels per connection. Legal are "1" or "2"
ISDN1	ISDN number of first B channel
ISDN2	ISDN number of second B channel (only with y=2)

Disconnection:

DIS xx

        xx   Port number which should be disconnected.
                          Legal values from 01 to 0F (128 kbps) or 1E (64 kbps).

                          All disconnections have to be realised individually!

Status Interrogation:

GET STAT

Feedback Message: STAT=xxyy xxyy xxyy ....

        first xxyy group   -> Port 1
        second xxyy group -> Port 2
        ...
        xx   Connection Status
              05,24 No connection
              18   Call initiated
              25   Connection not possible
              28   ISDN connection established, synchronisation in progress
              40   ISDN connection OK

        yy   ISDN error code. This value only applies if the connection status is 25.
              For a detailed description of the error codes, please see the
              MusicTAXI manual.

Charge Interrogation:

GET CHRG

Feedback Message: CHRG=aaaa bbbb cccc ....

        aaaa   charges Port 1
        bbbb   charges Port 2
        cccc   charges Port 3
        ...
        The feedback message of charges is in Hex.

ISDN Number Interrogation:

GET NUM xx

Feedback Message: NUM=xx ISDN

> xx   Port number, at which the ISDN number of the partner unit is to interrogated. Legal values 01 to 0F (128 kbps mode) or 1E (64 kbps mode).

> ISDN ISDN number of partner unit..

If no connection is established during the interrogation, the number of the last connection is displayed.

Display and Keyboard Functions

The S2M-Bridge is normally controlled by a PC to prevent manual operations for set-up or calling.

After switching the S2M-Bridge on, an initialising is effected and after a few seconds the following display shown:

```
        0               1               2               3  MENU
        1 2 3 4 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0
DISC            ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦
CALL        ¦ ¦                                             ____
CON       ¦ ¦                                               128
SYNC   ¦¦                                                   RES
REJ                                                         DISC
```

In the top line the B channel number (1 to 30) is displayed. A port consists of two B channels in 128 kbps mode.

The individual B channels are displayed as dark squares. The squares are displayed in the line which corresponds to the status of the respective B channel during the establishment of an ISDN connection..

DISC   B channel not connected (disconnected)
CALL   B channel called (call)
CON   B channel is connected (connected)
SYNC   B channels are synchronised to a single data stream, the respective squares are displayed as a single rectangle in 128 kbps mode.
REJ   Connection could not be established. The reason is transmitted to the control PC and can be read via remote commands.

Menu Functions

128	Switching between 128 kbps mode and 64 kbps mode The present valid mode is displayed.
RES	Reset of S2M-Bridge. Still established connections are disconnected first.
DISC	Disconnection of all ISDN connections. This function is to be understood as an "Emergency shutdown" only, should any problems occur with the PC control and established connections have to be disconnected.

Attention:	No request for confirmation is asked for, the established connections are immediately disconnected!

The function is selected by moving the inverse displayed array with *UP/DOWN* to the required function and confirming with *ENTER*

Keyboard Functions:

Not labelled top key	Reset of S2M-Bridge. Already established connections are **not** disconnected!
Not labelled middle key	Please see menu item DISC

Attention:	The S2M bridge should never be switched off or reset while connections are still established. This might lead to a crash of the S2M access which can only be activated again by the Telekom!

Connection Assignment

S2M connection: To connect the S2M bridge with the S2M connection

Connector: 25pol-Sub-D

Assignment: Pin	signal name		S2M-Pin
1	b	↓	6
13	a	●	5
14	b	↑	9
25	a	●	8
	shield		7,10

Remote Control: Serial asynchronous interface for remote control with a PC

Setting:	9600 Baud
	8 data bits
	1 stop bit
	No parity

Connector: 9pol Sub-D

Assignment:	1,4,6,7,8,9	not assigned	
	2	Tx	(output)
	3	Rx	(input)
	5	GND	(shield)

MT Remote: Serial asynchronous interface to control the MusicTAXI

Connector: 9pol-Sub-D-Buchse

Assignment:	1,2,4,6,7,8,9	not assigned	
	3	Tx	(output)
	5	GND	(shield)

The connection cable to the MusicTAXI has to be assigned 1:1.

X.21:   Serial synchronous interface for transmitting data

Data rate: 128 kbps

Connector: 15pol Sub-D

Assignment: 1, 3, 5, 7, 10,
                   12, 14, 15   Not assigned
                   2   Rx(a)
                   4   Tx(a)
                   6   CLK(a)
                   8   GND
                   9   Rx(b)
                   11   Tx(b)
                   13   CLK(b)

The connection cable to the MusicTAXI has to be assigned 1:1.

S2M Bridge Connection with MusicTAXI