MusicTAXI
PAN
PRO

Manual V99/V1.03

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Certification / Labelling

The Certification Body of the TÜV Management Service GmbH certifies that DIALOG4 System Engineering GmbH, Ludwigsburg, has established and applies a quality systems for Research & Development of MPEG related hard- and software products for the professional and consumer market, production management, quality control, sales and after-sales service. An audit was performed, report no. QM-F-98/1461. Proof has been furnished that the requirements according to DIN EN ISO 9001:1994 are fulfilled.

The MusicTAXI PAN-PRO is designed according to protection class 1 (EN 60950 / VDE 0805 / IEC 950). It is manufactured according to the electrotechnical regulations and fulfils the regulations for prevention of accidents 'Electrical Systems and Materials' (VBG4, §5 paragraph 4).

A Declaration of Conformity constitutes that the PAN-PRO corresponds to the EC directive: EMC 89/336/ EWG as well as the 'low voltage regulation' 72/23/ EWG with applied harmonised standards.

The MusicTAXI PAN-PRO is designed according to the EMC directive, with the harmonized standards DIN EN 55103-1 (June 97) interference radiation, ambiance E1 and DIN EN 55103-2 (June 97) resistance to jamming, ambiance E5.

Taking into consideration the demand on resistance to jamming, for the quality and impairment the intensity degree 4 of the 5-stage scale of the ITU/R recommendation 500-4 applies.

Note on EMV Measures

According to the requirements of the EMC directive, the regulations for the electromagnetic compatibility, it is necessary that the following measures have to be observed when using/manufacturing the connection cables:

• For all connections shielded cables should be used.
• The shields should be soldered to the GND connections and additionally to the connector shell directly.

General
The MusicTAXI PAN-PRO is a desktop unit designed for the external remote operation of the MusicTAXI SL-PRO and VP-PRO. For installation no further preparations have to be observed.
With the PAN-PRO a MusicTAXI SL-PRO or a VP-PRO can be remotely operated. Every parameter for an audio connection can be set conveniently using the PAN-PRO. However, it is not possible to exchange the ISDN numbers between a PAN-PRO and MusicTAXIs.

Climate
Operating temperature: -10 to +45 degrees Celsius
Relative Humidity: 30...90%.

Cabling
Correct operation of the MusicTAXI PAN-PRO together with MusicTAXIs is only guaranteed when the cables, which are included in our scope of delivery, are used and when the technical specifications of the respective software version are taken into consideration.

Guarantee
Unless otherwise stipulated, standard guarantee regulations are valid and applicable. Damages resulting from changes or improper repairs by the orderer or a third party are not covered by the guarantee.

Please note
This manual is for the use of the owners and their staff only. The information in the manual, including all texts and drawings, are to be treated as confidential, and are not to be reproduced or published. The manual, its contents or any parts of it are not be passed on to third parties or copied in any form. Hereby the right to registered utility models or patent application is reserved explicitly. In the case of violation or non-compliance resulting in consequential loses. DIALOG4 may be entitled to claim damages according to the German BGB, HGB as well as the competition law and Patents Act.

Due to the further development for product improvement of the present series units, and alterations of certain industrial parts, it cannot be avoided that some parts might not be fully compatible. All technical alterations may be subject to change without notice.

Explanation of Keypad Symbols

ISDN OK ERR	ISDN OK ERR	indicates a correct or rejected connection of the MusicTAXI. Release by pressing HANG UP
UP	UP	cursor moves upwards
DOWN	DOWN	cursor moves downwards
ENTER	ENTER	selected function is confirmed
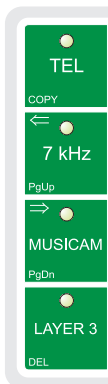
TEL	TEL	activates the G.711 algorithm
COPY	COPY	copies a telephone number
	⇐	cursor jumps to the left
7 kHz	7 kHz	activates G.722 algorithm
PgUp	PgUp	cursor jumps upwards to next page
	⇒	cursors jumps to the right
MUSICAM	MUSICAM	activates Layer II
PgDn	PgDn	cursor jumps downwards to next page
LAYER 3	LAYER 3	activates Layer 3
DEL	DEL	deletes marked number or letter

Graphical
Diplay Module

```
ONLINE:   0:30:52 (M)

     -50  -45  -40  -35  -30  -25  -20  -15  -10  -5    0  dB
TxL ████████████████████████████████████████
TxR ███████████████████████████████████████
RxL ██████████████████████████████
RxR ████████████████████████

                            Tx: L3  128K 48.0 JOINT STEREO
07141226622                 Rx: L3✛128K 48.0 JOINT STEREO
```
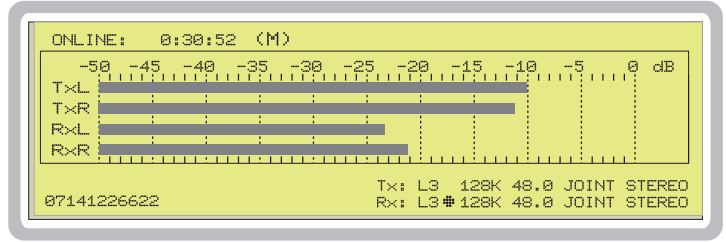
with integrated LCD controller, 128 CG-ROM and display
W x H x D: 180.0 x 65.0 x 12 mm
Visible Range: 132.0 x 39.0 mm
Display RAM: 8 kByte
240 (horizontal) x 64 (vertical) dots
40 letters x 8 lines, 64 columns
Letter: 6 x 8 dots
Letter size: 0.49 x 0.49 mm
Thermal limit values between 0° and +50°C

◑⁻ ◑+   contrast adjustment of display

0,1,2...9   number entry from 0 ... 9
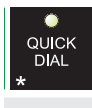
QUICK   connection establishment via quick dial
DIAL
    *   X for X.21 connections and possibly required for entry
         of sub-address

HANG UP   disconnection
CANCEL   cancels the last action
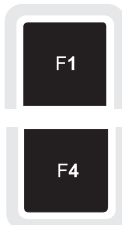
F1   function keys (in preparation)
F2
F3
F4

RS232/RS422 Serial Asynchronous Communication Interface

to connect the remote panel with the MusicTAXI SL-/VP-PRO

Format RS232/422:   9600 baud
                       8 data bits
                       1 stop bit
                       no parity

PORT 1

Connector: 9pol Sub-D

Pin	1	2	3	4	5
Assignment	**Rx+**	**Tx**	**Rx**	**Tx-**	**GND**
RS232		■	■		■
RS422	■			■	■
Function*	**I**	**O**	**I**	**O**	

* relating to PAN-PRO

■ =assigned **O**=Output   **I**=input

Pin	6	7	8	9
Assignment	**Rx-**	**NC**	**NC**	**Tx+**
RS232		🟥	🟥	
RS422	■			■
Function*	**I**			**O**

* relating to PAN-PRO

🟥 =not to be used! ■ =assigned **O**=Output   **I**=input

Attention	For RS232 internal signals are assigned to pins 2, 3 and 5, for RS422 only pins 1, 4, 5, 6 and 9. **A fully assigned 1:1 cable to the PC might result in the damage to the PC and/or MusicTAXI! Only use cables according to the described configuration!**

RS232/RS422
Serial, Asynchronous
Communication
Interface
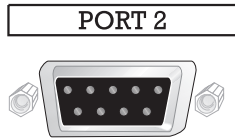
to connect the remote panel to a PC (pls. see page 12)

Format RS232/422:	9600 - 38400 baud
	8 data bits
	1 stop bit
	no parity

PORT 2

Connector: 9pol Sub-D

Please see page 10, PORT 1 for pin assignment of sockets, function, signal direction, etc

Connection Cables

KB017
PORT1 to SL/VP-PRO
(RS232)
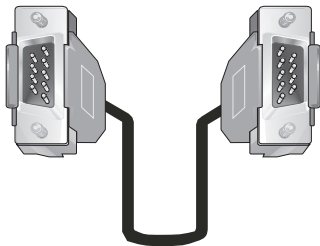
serial cable (included in our scope of delivery)
maximum length: 10m

SL-/VP-PRO connection   PAN-PRO connection

DB9 male   DB9 male
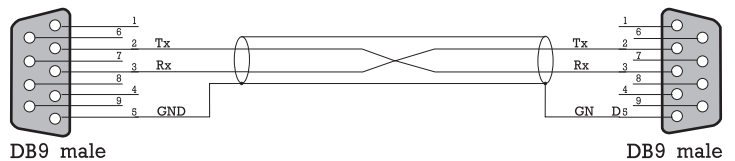
KB021
PORT1 to SL/VP-PRO
(RS422)
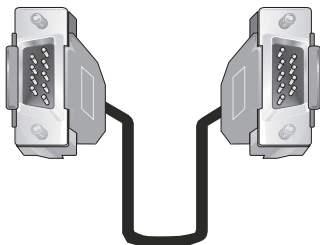
serial cable
maximum length: 500m.

SL-/VP-PRO connection   PAN-PRO connection
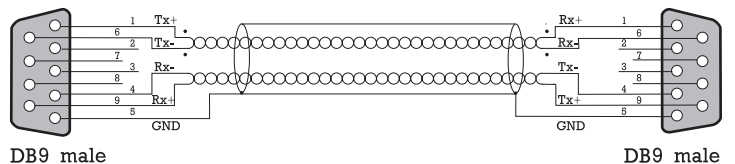
DB9 male   DB9 male

KB003 Serial Cable to PC
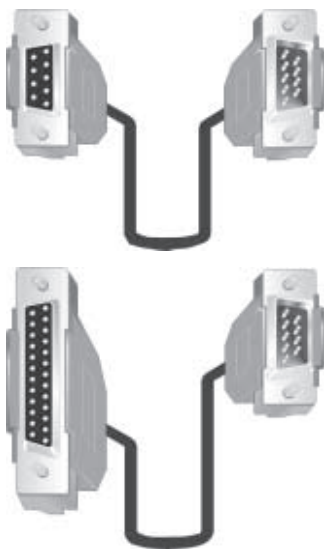
The MusicTAXI is connected to your PC using a serial 9-pole or 25-pole cable (male/female).

PC connection   PAN-PRO connection
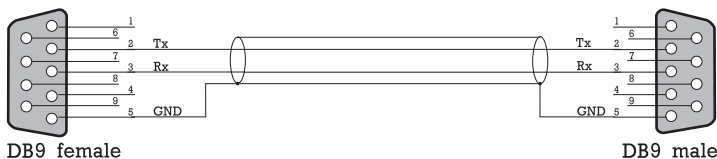
DB9 female   DB9 male

PC connection   PAN-PRO connection
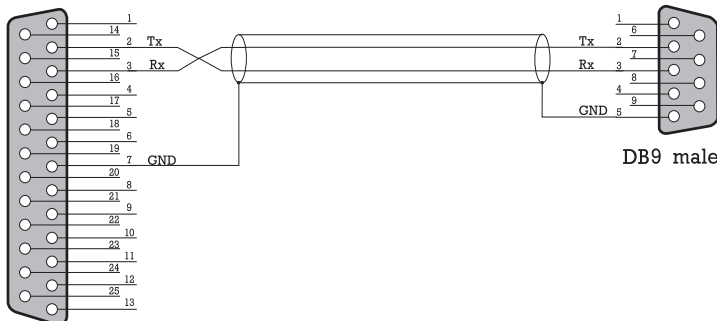
DB25 female

Software Update

The software is updated with the MusicTAXI PC Remote system software (not included in the delivery). After installing the programm on your PC, in the designed directory, switch off your PC and ensure that the connection between PC and PAN-PRO, as well PAN-PRO and MusicTAXI VP- or SL-PRO is correctly set.

Now switch on all the units and start the MTRemote application. During initialisation, the type of unit is interrogated and displayed.

Info The info function serves for checking the present software version of the connected PAN-PRO. All software parts including versions are displayed. You can also interrogate the serial number of your MusicTAXI.
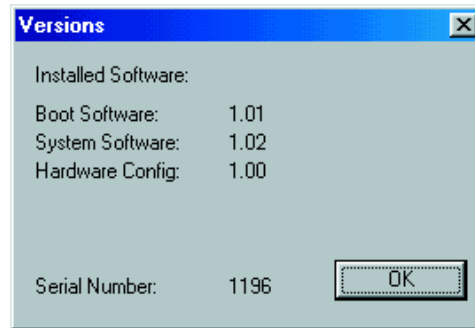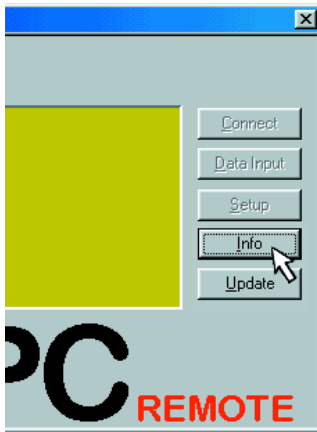
Update Contrary to the info function, not only the present software version but also the latest software versions are interrogated and displayed. You can additionally decide which software parts you would like to update in the MusicTAXI. Select the new version with the left mouse button and confirm the update function with OK.
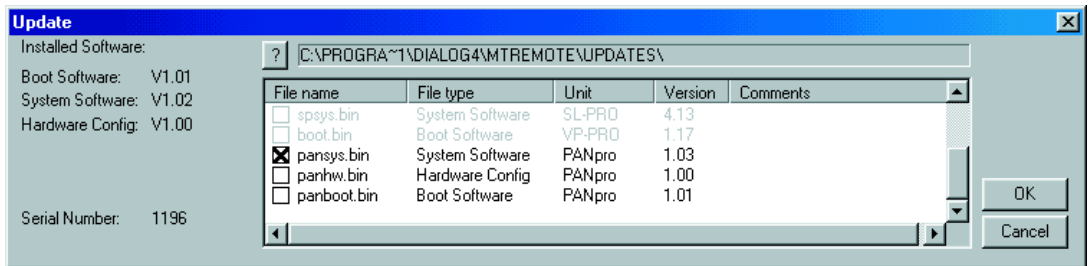
Attention Do not switch off your PC or PAN-PRO during the update process. After an unsuccessful update, an error message is displayed.
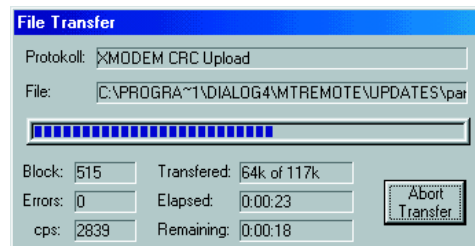
A dialogbox accompanies you throughtout the update and informs you about the current process.

Relay Port

RELAIS PORT

Connector: 15pol Sub-D

Pin	1	2	3	4	5
Assignment	REL 1A	REL 2A	REL 3A	REL 4A	REL 5A
Function*	O		O	O	O

* relating to PAN-PRO   **O**=Output   **I**=Input

Pin	6	7	8	9	10
Assignment	REL 6A	IN 1	IGND	REL 1B	REL 2B
Function*		I	I	O	

* relating to PAN-PRO   **O**=Output   **I**=Input

Pin	11	12	13	14	15
Assignment	REL 3B	REL 4B	REL 5B	REL 6B	IN 2
Function*	O	O	O		I

* relating to PAN-PRO   **O**=Output   **I**=Input

REL1A - REL1B:
Potential free relay contact. The contact is closed as soon as the SL-PRO (or VP-PRO) has established a connection to another unit.

IN1 - IGND:
Optoelectronic coupler input, potential free. If +5V are fed between IN1 and 1GND, the PAN-PRO BUZZER is switched off.
If you would like to feed in a higher voltage, a resistor has to be superposed at IN1:
for 12V: 6k8 $^1/4$W
for 24V: 18k $^1/4$W.

REL2A - REL2B...
REL6A - REL6B
Potential free relay contacts, not assigned at the moment.

IN2
Optoelectronic coupler input, potential free, not assigned at the moment.

Acoustic Signal Transmitter
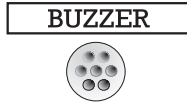
BUZZER

Volume and function are set in the SYSTEM SETUP menu.
The BUZZER can be switched off using an external switching signal, pls. see IN1 – 1GND.

Power Supply

10..30V DC
0,70..0,24 A

Range: 10 ... 30 V DC, max. 6 VA
For the PAN-PRO we provide the power supply unit MAINY N1EFS, Type: 00390 372.
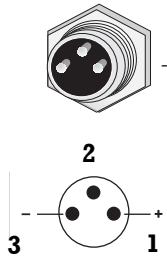
Connector: 3-pol Hirschmann connector
        Type   ELST 3308 RV FM8 05

Pin	1	2	3
Assignment	Vcc	🟥	GND

🟥 = not assigned

MAINY Power Supply Unit with Euro Connector

(included in the scope of delivery)

Input Voltage: 230 V

Power Range: 12 VA

Output Voltage: 12 V

Frequency: 45 - 65 Hz

Protection Class: II

Protection Type: IP 54

Short-circuit Proof.:   Unlimited

Main Menu
SYSTEM SETUP

After switching the unit on and a short initializing sequence the 3 pages of the basic configuration menu of the MusicTAXI appears (pls. see also "Status Messages, page 34)

```
MAIN MENU

CONNECT
DATA INPUT
SYSTEM SETUP
```

UP
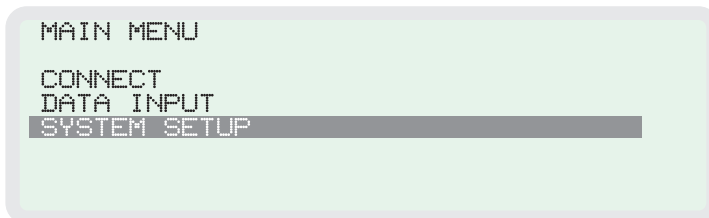
DOWN

ENTER

Select SYSTEM SETUP from the main menu with the UP/DOWN keys and confirm with ENTER.

```
SYSTEM SETUP

ACCEPT CONFIGURATION
ISDN CONFIGURATION
AUDIO LEVEL
INTERFACES
DELETE DATABASE
EXIT / STORE
```
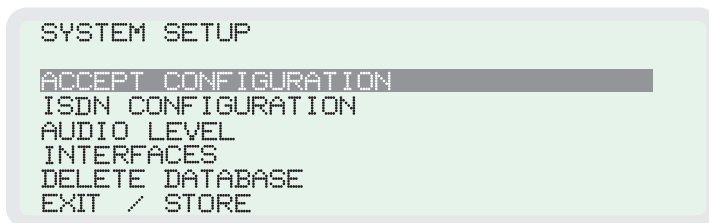
ACCEPT CONFIGURATION

This sets up the call accept mode of the MusicTAXI. First you can set the accept mode **AUDIO DATA ENCODER** for the unit and transmission more or less specific and permanently. Then the MusicTAXI only accepts calls in the respective configuration. Or you can select the operation mode AUTO (Automatic Codec Detection). Then the MusicTAXI serves as a SLAVE and takes over the parameters of the calling unit automatically.

The AUTO mode is not available for AUDIO INPUT and USER DATA.

Algorithm

The **ALGORITHM** menu item serves for setting the desired data reduction procedure when calls are coming in.
You can select between: LAYER 2, LAYER 3 and AUTO (G.711/G.722 calls are also accepted).

```
AUDIO DATA ENCODER
ALGORITHM          AUTO
ISDN SYNC          MusicTAXI
SAMPLINGRATE       AUTO
AUDIO MODE         AUTO
AUDIO INPUT        ANALOG
USERDATA           1200 Baud
EXIT
```
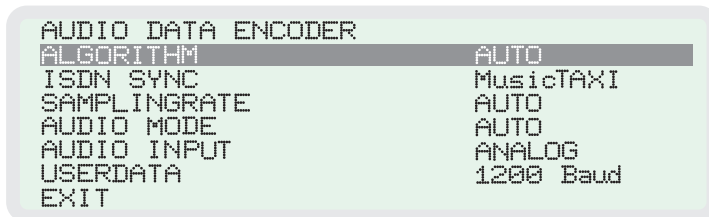
ISDN SYNC   The **ISDN SYNC** menu serves for setting the desired SYNChronization procedure.

```
AUDIO DATA ENCODER
ALGORITHM               AUTO
ISDN SYNC               MusicTAXI
SAMPLINGRATE            AUTO
AUDIO MODE             AUTO
AUDIO INPUT            ANALOG
USERDATA               1200 Baud
EXIT
```

You can select between:

MusicTAXI (DIALOG4 SYNC for 1 ... 6 B-channels)
PRIMA (CCS SYNC for 2 B-channels)
ZEPHYR (Telos SYNC for 2 B-channels)
NO SYNC (when using 1 B-channel)
NO SYNC (INV) when using 1 B-channel
AUTO - Automatic Codec Detection

Please note   By selecting PRIMA or ZEPHYR accept mode, a G.722 call cannot be received.

Sampling Rate   The SAMPLING RATE menu item serves for setting the desired sampling frequency when calls are coming in.

```
AUDIO DATA ENCODER
ALGORITHM               AUTO
ISDN SYNC               MusicTAXI
SAMPLINGRATE            AUTO
AUDIO MODE             AUTO
AUDIO INPUT            ANALOG
USERDATA               1200 Baud
EXIT
```

You can select between:

16, 22.05, 24, 32, 44.1, 48 kHz
AUTO (the sampling frequency of the calling unit is taken over).

Audio Mode   The menu item AUDIO MODE serves for setting the desired audio behavior, when calls are coming in.

```
AUDIO DATA ENCODER
ALGORITHM                AUTO
ISDN SYNC                MusicTAXI
SAMPLINGRATE             AUTO
AUDIO MODE               AUTO
AUDIO INPUT              ANALOG
USERDATA                 1200 Baud
EXIT
```

You can select between:

MONO	Mono signal. The left input is used
DUAL MONO	Two different signals which do not interfere with each other, e.g. One channel - O sound One channel - translation
STEREO	In the same way as for DUAL MONO, each channel is coded separately, however, if on one channel less or no audio is transmitted, these bits are assigned to the other channel (i.e. bit assignment according to demand).
JOINT STEREO	Comparable to MS stereophony (middle/side signal). It codes the sum of left and right and the difference between left and right; these are coded and transmitted separately (subjectively better quality at lower data rates).
AUTO	The audio mode of the calling unit is taken over.

Audio Input

```
AUDIO DATA ENCODER
ALGORITHM                AUTO
ISDN SYNC                MusicTAXI
SAMPLINGRATE             AUTO
AUDIO MODE               AUTO
AUDIO INPUT              ANALOG
USERDATA                 1200 Baud
EXIT
```

The menu item **AUDIO INPUT** serves for setting the desired audio input, when calls are coming in.
You can select between:

Analog
AES/EBU
S/PDIF

User Data   The menu item **USER DATA** serves for setting the desired ancillary data, when calls are coming in.

```
AUDIO DATA ENCODER
ALGORITHM              AUTO
ISDN SYNC              MusicTAXI
SAMPLINGRATE           AUTO
AUDIO MODE             AUTO
AUDIO INPUT            ANALOG
USERDATA               1200 Baud
EXIT
```

You can select between:
OFF (no ancillary data are transmitted)
1200, 2400, 4800 baud by Layer 2
1200, 2400, 4800, 9600 baud by Layer 3.

Please note   If the transmission of ancillary data is switched off (OFF), the remote control signals are not transmitted either.

The lowest preset baud rate of the ancillary data is transmitted within the unit handshake framework.
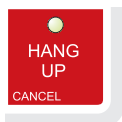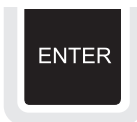
Press ENTER to take over the presetting of the call acceptance. Press CANCEL and the presetting is not taken over.

Exit   Select EXIT to leave the menu item AUDIO DATA ENCODER and to get back to SYSTEM SETUP. Confirm with ENTER..

```
AUDIO DATA ENCODER
ALGORITHM              AUTO
ISDN SYNC              MusicTAXI
SAMPLINGRATE           AUTO
AUDIO MODE             AUTO
AUDIO INPUT            ANALOG
USERDATA               1200 Baud
EXIT
```

**ISDN
CONFIGURATION**

```
SYSTEM SETUP

ACCEPT CONFIGURATION
ISDN CONFIGURATION
AUDIO LEVEL
INTERFACES
DELETE DATABASE
EXIT / STORE
```

The MusicTAXI has 12 different ISDN D-channel protocols. Please make sure that you have selected the correct protocol.

ISDN Protocol

```
ISDN CONFIGURATION

ISDN PROTOCOLL                  ETSI
LOCAL NUMBERS
SPID NUMEBRS
DIALING
INCOMMING CALLS
EXIT
```

Decisive is the ISDN protocol of your connection, not the one of the partner unit! Alter the settings by pressing the ENTER button.

Local Numbers

If your local ISDN numbers are entered here they will be sent when establishing a connection. This is not necessary when the unit is operated at a S_0 connection, however, when the VP-PRO is connected to a private exchange it might be helpful (pls. see page 23).

```
ISDN CONFIGURATION
ISDN PROTOCOLL                  ETSI
LOCAL NUMBERS
SPID NUMEBRS
DIALING
INCOMMING CALLS
EXIT
```

```
ENTER LOCAL ISDN NUMBER

ISDN#1  ▪
ISDN#2

PRESS ´ENTER´ TO EDIT N
```

Press ENTER and input the wanted telephone number using the numeric keypad. To change to another input field and/or finalize your entry, press ENTER.

The entered telephone number can be altered, copied or deleted by pressing the respective keys.
.

DEL   COPY   ⇐   ⇒

SPID Numbers

The SPID numbers, you enter here, are also sent when the connection is established. This is only necessary when operated on US or Canadian networks.

```
ISDN CONFIGURATION

ISDN PROTOCOLL            ETSI
LOCAL NUMBERS
SPID NUMEBRS
DIALING
INCOMMING CALLS
EXIT
```

Enter the SPID number as described above for LOCAL NUMBERS.

```
ENTER SPID NUMBERS


SPID#1 ▉
SPID#2


PRESS 'ENTER' TO EDIT NEXT NUMBER
```

Press ENTER to finalize your entry.

Dialing

```
ISDN CONFIGURATION

ISDN PROTOCOLL            ETSI
LOCAL NUMBERS
SPID NUMEBRS
DIALING
INCOMMING CALLS
EXIT
```

DIALING ATTEMPTS
This menu item serves for setting the desired dialing attempts. You can select between 1 and 5.

```
DIALING

DIALING ATTEMPS          2
DIALING DELAY            10 s
REDIALING ATTEMPS        2


EXIT
```

DIALING DELAY

This menu item serves for setting the desired time between the dialing attempts. You can select between 0 ... 60 seconds.

REDIALING ATTEMPTS

This menu item serves for setting the desired redialing attempts, if a connection had not been interrupted by the calling MusicTAXI. You can select between 1 and 5.

EXIT

Press EXIT to confirm your basic settings or alterations.

Incoming Calls The last menu item **INCOMING CALLS** defines the behavior of the MusicTAXI when it is operated at a S_0 connection together with other units.

```
 ISDN CONFIGURATION

 ISDN PROTOCOLL              ETSI
 LOCAL NUMBERS
 SPID NUMEBRS
 DIALING
 INCOMMING CALLS
 EXIT
```

```
 INCOMMING CALLS

 ACCEPT TEL. CALLS        ALWAYS
 ACCEPT MPEG/G.722 CALLS  ALWAYS
 TEST CALLED NUMBER       NO
 BUZZER                   OFF

 EXIT
```

First set **ACCEPT TELEPHONE CALL** to:
ALWAYS   every telephone call is accepted
NEVER   all telephone calls are rejected
ASK   manual confirmation of each call is requested
         by the unit.

With the menu item **ACCEPT MPEG/G.722 CALLS** the behavior for incoming MPEG/G.722 calls is determined. The setting options are described above:

ALWAYS, NEVER and ASK

The menu item **TEST CALLED NUMBER** activates the interrogation of the MSN number when calls are coming in. You have to enter the correct MSNs of your connection in the menu item LOCAL NUMBERS (pls. see page 20).

In case of EURO ISDN, the MSN is usually the ISDN number of your connection without the area code, in case of private exchanges the number of your extension.

Only activate this function (YES), if you operate other units (e.g. a telephone, telefax or PC card) at the same ISDN connection in addition to the MusicTAXI.

Attention   The incorrect configuration of only one unit might result in the rejection of all calls.

BUZZER
The built-in acoustic BUZZER serves as a telephone ringer. You can either switch the buzzer off (OFF) or adjust the volume. You can select between 1 (low) and 4 (high) using the ENTER key.

```
 INCOMMING CALLS

 ACCEPT TEL. CALLS          ALWAYS
 ACCEPT MPEG/G.722 CALLS    ALWAYS
 TEST CALLED NUMBER         NO
 BUZZER                     3

 EXIT
```

You can also switch the BUZZER off via an external switch signal as described above for RELAY PORT, IN1-1GND on page 14.

EXIT
Select EXIT to confirm your settings and to get back to SYSTEM SETUP. Confirm with ENTER.

AUDIO LEVEL

```
SYSTEM SETUP

ACCEPT CONFIGURATION
ISDN CONFIGURATION
AUDIO LEVEL
INTERFACES
DELETE DATABASE
EXIT / STORE
```

Level Range   This menu item allows the adjustment at the level range: 50 or 80 dB.

```
AUDIO LEVEL

LEVEL RANGE            50 dB
HEADROMM              0 dB
ADJUST I/O LEVELS


EXIT
```

Headroom   This menu item serves for setting the desired headroom. You can select between 0 and 20 dB steps. Ex factory the setting is 0 dB. The scale display in the online menu is moved.

Attention   Clipping limit is at 0 dB + selected headroom!

Adjust I/O Levels   This menu item serves for setting the analog INPUT and OUTPUT level for the left and right channel. Ex factory the levels are set at +12 dBu, the headroom is 0 dB.

```
     -4  -2   0   +2  +4  +6  +8 +10 +12 +14 +16 +18 +20  dB
  IL ▶|||||||||||||||||||||||||||||||||||||||||||||||||||| ◀
  IR
  OL
  OR
     PRESS `UP´/`DOWN´ TO CHANGE LEVEL
     PRESS `PAGE UP´/`PAGE DOWN´ TO SELECT I/O   `ENTER´ TO EXIT
```
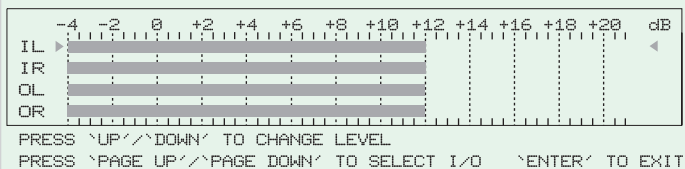
This means: input level = output level = 12 dBu.

7 kHz PgUp **MUSICAM** PgDn   PgUp and PgDn selects the respective channels. With the UP and DOWN keys the repective level values are adjusted in 0.5 dB steps.

UP   **DOWN**

INTERFACES

```
SYSTEM SETUP

ACCEPT CONFIGURATION
ISDN CONFIGURATION
AUDIO LEVEL
INTERFACES
DELETE DATABASE
EXIT / STORE
```

External
SYNC INPUT

The MusicTAXI has a sample rate converter at the audio INPUT and OUTPUT:

```
INTERFACES

EXTERNAL SYNC INPUT     DISABLED
ALARM SIGNALS           OFF



EXIT
```

For the external SYNChronization of the digital output you can select between:

DISABLED	Word clock is generated from the transmission clock
DIGITAL IN	Word clock is generated from the AES/SPDIF input signal
SYNC IN	Word clock is taken from the SYNC IN

Alarm Signals

```
INTERFACES

EXTERNAL SYNC INPUT     DISABLED
ALARM SIGNALS           OFF
```

If the signals are switched OFF, please see the MusicTAXI SL-PRO/VP-PRO manuals for the behavior ALARM CONTROL INTERFACE. Otherwise you can select between:

CON	The signal is set at Pin 19, as soon as the decoder is SYNChronized – i.e. when the connection is OK.
DIS	The signal is set at pin 18, if the line had been disconnected from the partner unit or due to an ISDN failure
CON+DIS	Both signals are set.

Default Presettings in
SYSTEM SETUP
ex Factory

ACCEPT CONFIGURATION
    AUDIO DATA ENCODER
        ALGORITHM   Auto
        ISDN SYNC   Auto
        SAMPLINGRATE   Auto
        AUDIO MODE   Auto
        AUDIO INPUT   Analog
        USERDATA   Off

ISDN CONFIGURATION
    ISDN PROTOCOLL   ETSI
    SPID NUMEBRS   no entry
    LOCAL NUMBERS   no entry
    DIALING
        DIALING ATTEMPTS   1
        DIALING DELAY   10
        REDIALING ATTEMPTS 0
    INCOMMING CALLS
        ACCEPT TEL. CALLS   Always
        ACCEPT MPEG/G.722 CALLS Always
        TEST CALLED NUMBER   No
    AUDIO LEVEL
        LEVEL RANGE   50 dB
        HEADROOM   0 dB
        ADJUST I/O LEVELS   all levels +12 dBu
    INTERFACES
        EXTERN. SYNC INPUT Disabled
        ALARM SIGNALS   Off

Delete Database

```
         REALLY DELETE ALL NUMBERS ?

 DEL ->CONTINUE         HANG UP ->CANCEL
```

LAYER 3
DEL

HANG UP
CANCEL
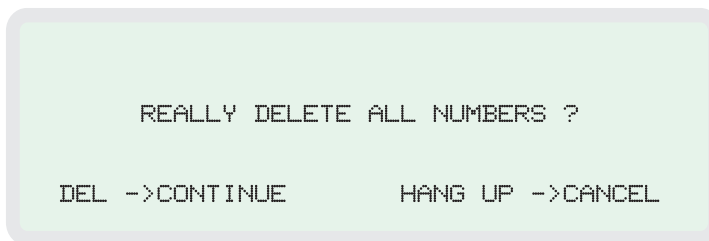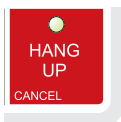
Attention   Deletes all entries from the ISDN telephone directory of the PAN-PRO when pressing the DEL key. The settings in the SYSTEM SETUP of the MusicTAXIs are not effected.

Main Menu
DATA INPUT

Select **DATA INPUT** from the MAIN menu and confirm with ENTER.

```
MAIN MENU

CONNECT
DATA INPUT
SYSTEM SETUP
```

The ISDN directory is displayed with 96 entries, name and audio configuration:

```
DIRECTORY

1                    48 M X   64 L3
2                    48 M X   64 L3
3                    48 M X   64 L3
4                    48 M X   64 L3
5                    48 M X   64 L3
6                    48 M X   64 L3
```

Enter New Recipient

Choose a free entry to input a new connection partner or select an existing entry to edit. Confirm by pressing the ENTER key.

```
DATA INPUT

ISDN NUMBERS

AUDIO DATA ENCODER
SHORTNAME

EXIT/STORE
```

Further input menus are displayed in which you can determine the audio parameters, telephone number as well as ISDN SYNC procedure.

ISDN Numbers

In conjunction with the numbers of ISDN modules the available input field for ISDN#1 to ISDN#6 is displayed.

```
ENTER ISDN NUMBERS - ENTRY 11


ISDN#1 ■
ISDN#2


PRESS ´ENTER´ TO EDIT NEXT NUMBER
```

The cursor flashes when you can start the input of the ISDN numbers. You can change between the ISDN input fields by using the ENTER button.

Please note   The ISDN SYNC can only be selected after you have entered the ISDN number.

```
DATA INPUT

ISDN NUMBERS
ISDN SYNC
AUDIO DATA ENCODER
SHORTNAME

EXIT/STORE
```

ISDN SYNC   The **ISDN SYNC** menu serves for selecting the codec of your connection partner. The possible SYNC mode are:

MusicTAXI (DIALOG4 SYNC for 1 ... 6 B-channels)
PRIMA (CCS SYNC for 2 B-channels)
ZEPHYR (Telos SYNC for 2 B-channels)
NO SYNC when using 1 B-channel
NO SYNC (INV) when using 1 B-channel
AUTO - Automatic Codec Detection

Please see chapter Audio Compatibility for the presettings for ZEPHYR and PRIMA (pages 38-39).

Audio Data Encoder

In this menu you can determine all audio parameters for the planned connection.

```
DATA INPUT

ISDN NUMBERS
ISDN SYNC
AUDIO DATA ENCODER
SHORTNAME

EXIT/STORE
```

The menu leads you from **ALGORITHM** (Layer 2, Layer 3, G.711, G.722), BITRATE to USERDATA. Please do not forget to define the audio input correctly. AES/EBU for digital units with professional format, S/PDIF for digital units with consumer format, ANALOG for analog units.
Press EXIT to leave the menu.

G.722 with H.221 or SRT SYNC

If you enter a G.722 partner in the DATA INPUT menu, please observe the following order:

1. Enter the ISDN number.
2. Enter G.722 in ENCODER DATA
3. Determine the SYNC modes in ISDN SYNC.

```
DIRECTORY

1  BR3    089663410     16 M X   64 G7 S
2  D4     07141226622   48 J A  256 L3 M
3  SWR3   071145632     16 M X   64 G4 H
4  BR3    089663410     32 S A  128 L3 M
5                       48 M X   64 L3
6                       48 M X   64 L3
```

Press EXIT/STORE to leave the menu. Now H = H.221 or S = SRT is displayed in the directory for the selected SYNChronisation procedure.

Short Name

As soon as you have entered the ISDN number, you can enter up to 7 letters and numbers as an abbreviated name of your connection partner.

```
DATA INPUT

ISDN NUMBERS
ISDN SYNC
AUDIO DATA ENCODER
SHORTNAME

EXIT/STORE
```

```
ENTER SHORT NAME - ENTRY 1


SHORT NAME: DIALOG4


PRESS 'ENTER' TO EDIT
```

With UP and DOWN the alphabet is displayed, via numeric keypad all numbers are available. By pressing the ENTER key you leave the menu.

Exit/Store

Press EXIT/STORE to finalize your entry. The entered data is stored and you can select them using the cursor for your connection establishment.

X.21 Mode

To activate the X.21 interface, enter an 'X' in the ISDN#1 field, by using the * key.

CODEC LOOP

If nothing has been entered for ISDN1#, the MusicTAXI starts in the operation mode CODEC LOOP. This serves as test for the coded audio signal (without ISDN).

Explanations

Call Acceptance with ISDN SYNC AUTO

The function AUTO (Automatic Detection of the calling Unit) is entered in THE SYSTEM SETUP/ACCEPT CONFIGURATION. The function ISDN SYNC AUTO has priority over all other entries. This means, if AUTO is set and the MusicTAXI is called by any competitor's codec (Telos ZEPHYR, CCS CDQPRIMA, GSM telephone, analog telephone, etc.) the MusicTAXI sets itself to the audio parameters incl. SYNC modes of the calling unit automatically. This might last up to 30 seconds.

However, the set parameters of the SYSTEM SETUP/ACCEPT CONFIGURATION are taken over, if the MusicTAXI is called by a MusicTAXI.

Connection Establishment with ISDN SYNC AUTO

When a connection partner is entered into the telephone directory, ISDN SYNC and audio parameters can be preset in the configuration. However, if ISDN SYNC AUTO had been entered, it has priority over all other setting, i.e. if a connection is established to competitor units (Telos ZEPHYR, CCS CDQPRIMA, GSM telephone, analog telephone, etc.) the MusicTAXI sets itself to the audio parameters incl. SYNC modes of the remote unit automatically. This might last up to 30 seconds.

Connection Establishment with CODEC LOOP

In the operation mode CODEC LOOP, the incoming audio signal is coded first and then transmitted via the decoder to the output.

X.21 Operation

In the operation mode X.21, MPEG data is transmitted and received via the X.21 interface. The network clock has to be identical to the bit rate, which had been entered in the configuration menu.

**Main Menu
CONNECT**

The respective ISDN connection can be established quickly and easily because the built-in telephone directory permits 96 entries, each of which can be individually configured. For establishing the connection you can choose between dialing via telephone directory, abbreviated entry and entry number or manual input using the numeric keypad

```
MAIN MENU

CONNECT
DATA INPUT
SYSTEM SETUP
```

**Establishing a
Connection by Using
the Telephone Directory**

Select CONNECT from the main menu and press ENTER to confirm. The ISDN telephone directory with 96 entries appears.

```
DIRECTORY

1 BR3      089663410    48 M X 128 L2 P
2 D4       07141226622  48 J A 256 L3 M
3 SWR3     071145632    44 M X 256 L2 M
4 SWR3     071145632    16 M X  64 G7 H
5 BR3      089663410    32 S A 128 L2 P
6 BR3      089663410    32 M X  64 L3 Z
```

The abbreviated name of your connection partner, the ISDN number, the selected audio parameters as well as the name of the partner codec, which are assigned to each entry, are displayed. Press ENTER to confirm and start.

The MusicTAXI informs you permanently on the present transactions.

```
        CALLING ... 1/6

        07141226622
```

After the successful synchronization your MusicTAXI displays the message ISDN OK and goes to the on-line menu.
If the connection is rejected the MusicTAXI displays ERR(OR) and the reason for the rejection.
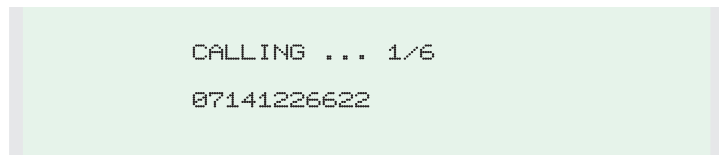
Connection Establishment

Quick Dial Connection Establisment

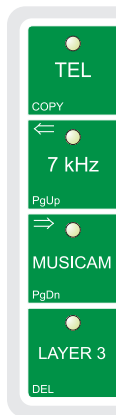The 96 entries can be selected via quick dial assignments. Press the key QUICK DIAL.

QUICK
DIAL
*

```
      SELECT DESTINATION ▮
```
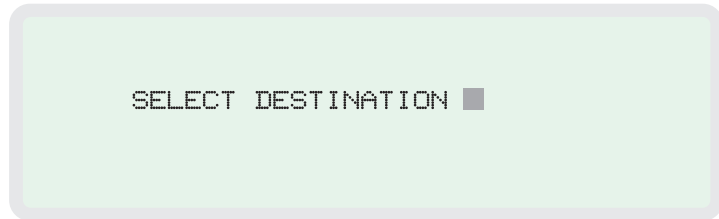
The menu interrogates the entry number of your connection partner (from 01 to 96).

```
         CALLING ... 1/6

         07141226622
```

The dialing is effected automatically with the pre-set parameters.

Establishing a Connection Using the Numeric Keypad

First you have to determine the transmission mode. Via keypad you select between TELephone (3.1 kHz), 7kHz (G.722/H.221, G.722/SRT), MUSICAM or LAYER 3.

ISDN
OK   ERR

UP

DOWN

ENTER

TEL
COPY

7 kHz
PgUp

MUSICAM
PgDn

LAYER 3
DEL

```
   DIRECT CALL G.722 - ENTER ISDN NUMBER

   ISDN#1 ▮

   ISDN SYNC: AUTO  <CHANGE WITH UP/DOWN>

   PRESS 'ENTER' TO DIAL
```
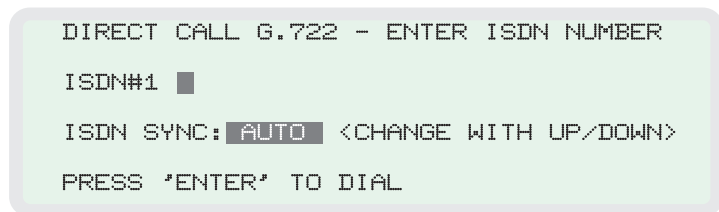
The input menu asks for the ISDN number to be entered using the numeric keypad as usual. Dialing is initiated by pressing the ENTER key.

Please note

The connection parameters are determined as follows:
When entering only one ISDN number: 64 kbps, 48 kHz, mono, user data 1200 baud.
When entering two ISDN numbers: 128 kbps, 48 kHz, joint stereo, user data 1200 baud.
The audio input is taken from the ACCEPT CONFIGURATION. The used ISDN SYNC is always AUTO. You can select between AUTO, H.221 and SRT for the G.722 mode.

X.21 Connection Establishment   Select an entry with 'X' as the first number of the ISDN number from the telephone directory.
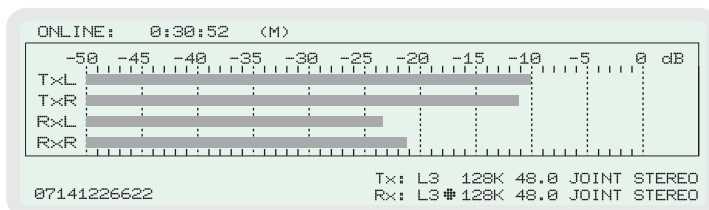
CODEC LOOP Connection Establishment   Select an entry without an ISDN number from the telephone directory. The connection is established either via telephone directory or quick dial.

Connection Monitoring   You can easily monitor your audio transmission. After the connection is established and the audio parameters are exchanged, the on-line transmission menu is displayed. It informs you on the send and receive levels, connection time as well as set headroom and ISDN SYNC. In addition to the send (Tx) and receive configuration (Rx) the ISDN number of your connection partner is displayed.

```
ONLINE:   0:30:52   (M)

      -50  -45  -40  -35  -30  -25  -20  -15  -10  -5    0  dB
TxL ┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊
TxR ▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆
RxL ▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆
RxR ┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊┊

                          Tx: L3  128K 48.0 JOINT STEREO
07141226622               Rx: L3✴128K 48.0 JOINT STEREO
```

✳ SYNC Display   The SYNC display in the Rx path confirms that the decoder of your connection partner receives correct data.

The SYNC display only appears, if the connection is established between MusicTAXIs, not if it is established to competitor's codecs.

Connect Menu   If the ENTER key is pressed during a connection, the CONNECT MENU is displayed without line disconnection. It provides the following possibilities:

```
CONNECT MENU

PREVIOUS MENU
AUDIO DATA ENCODER
ADJUST I/O LEVELS
DISCONNECT
```
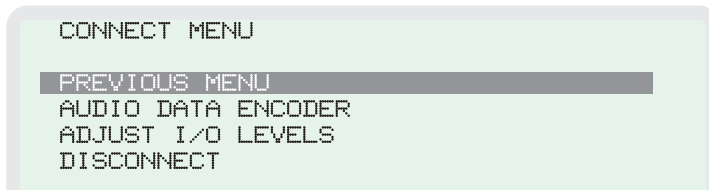
PREVIOUS MENU	return to former display
AUDIO DATA ENCODER	alteration of audio parameters and audio inputs
ADJUST I/O LEVEL	alteration of INPUT/OUTPUT level actuator
DISCONNECT	disconnection

Disconnection

HANG UP CANCEL
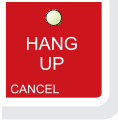
A connection is ended by pressing the HANG UP key twice within 10 seconds (during the flashing of the HANG UP LED). Otherwise the disconnection is ignored. After the disconnection the message:

```
LOCAL DISCONNECT
```

is displayed. On the display of your connection partner the message 'REMOTE DISCONNECT' appears.
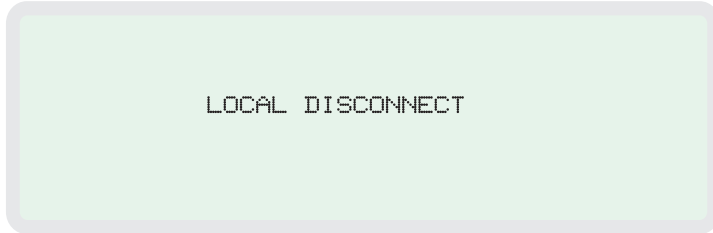
After the disconnection the MusicTAXI VP-PRO changes to the standby mode, awaiting the next connection command or incoming calls. If the VP-PRO is called, it is configured to the calling codec automatically irrespective of whether the unit is called by a telephone, telephone booth or studio: The MusicTAXI VP-PRO reacts fully automatically and guarantees the audio transmission.

Status Messages

In the online menu the following messages can be displayed:

Status Messages	Possible Cause
• NO X.21 CLOCK	No X.21 clock was determined.
• ILLEGAL X.21 CLK	The measured X.21 clock does not correspond to a ISO data rate. The measured clock frequency is displayed.
• NO INPUT SIGNAL	The AES or SPDIF input has been set and there is no signal at the selected input.
• DSP TIMEOUT	On access to the DSPs there is no confirmation message.
• ISDN PIPELINE OVERFLOW	ISDN operation is not possible.
• REMOTE PIPELINE OVERFLOW	The remote port does not respond.
• INITIALIZING... (RS232) or (RS422)	No MusicTAXI is connected or switched on.

Error Codes	Possible Cause	Test Point/ Correction
• S BUS NOT RESPONDING	The MusicTAXI could not establish a communication to the ISDN connection: • ISDN cable not plugged in • ISDN cable damaged • ISDN connection not in operation • Both B-channels of this connection are already used by another unit.	• Check ISDN cable and connection and try again.
• CHANNEL UNACCEPTABLE • CALL IN AN ESTABLISHED CHANNEL • USER BUSY • NON-SELECTED USER CLEARING • RESPONSE TO STATUS INQUIRY	The MusicTAXI could not establish a connection to the entered number: • Partner has already established a connection (busy) • The ISDN number is wrong.	• Check entered ISDN number and/or try again later.
• UNALLOCATED NUMBER • NO ROUTE TO SPECIFIED NETWORK • NO ROUTE TO DESTINATION • NUMBER CHANGED • DESTINATION OUT OF ORDER • INVALID NUMBER FORMAT • FACILITY REJECTED	The MusicTAXI could not establish a connection to the entered ISDN number: • the ISDN number is wrong and does not exist.	• Check entered ISDN number and/or try again later.
• NORMAL CALL CLEARING • NO USER RESPONDING • NO ANSWER FROM USER • CALL REJECTED • NORMAL, UNSPECIFIED	The MusicTAXI could not establish a connection to the entered ISDN number: • The ISDN number is wrong or does not exist • The called unit is not switched on or connected.	• Check ISDN number and try again later. • Check status of the partner unit

ISDN Error Codes

Error Codes	Possible Cause	Test Point/ Correction
• NO CHANNEL AVAILABLE • NETWORK OUT OF ORDER • TEMPORARY FAILURE • SWITCHING EQUIPMENT CONGESTION • ACCESS INFORMATION DISCARDED • CHANNEL NOT AVAILABLE • RESOURCES UNAVAILABLE	The ISDN network causes these error codes, i.e. the connection cannot be established due to the ISDN net. Possible causes could be: • No B-channel available, all channels used by another unit at the moment • ISDN net overloaded.	• Try again later
• INTER. NETWORKING, UNSPECIFIED	The cause for this error code is the change over between different ISDN nets of different providers, e.g. from a private one to the Telecom or foreign connections.	• Try again later
• INTERNAL TIMEOUT	During the connection establishment a time out occurred.	• Check ISDN number and protocol and try again later.
• QUALITY OF SERVICE UNAVAILABLE • REQUESTED FACILITY NOT SUBSCRIBED • BEARER CAPABILITY NOT AUTHORIZED • BEARER CAPABILITY NOT AVAILABLE • SERVICE OR OPTION NOT AVAILABLE • BEARER CAPABILITY NOT IMPLEMENTED • CHANNEL TYPE NOT IMPLEMENTED • REQUESTED FACILITY NOT IMPLEMENTED • ONLY RESTICTED DIG. INFO AVAILABLE • SERVICE OR OPTION NOT IMPLEMENTED	The cause for this error code is that one function is not supported by the ISDN net, which the MusicTAXI, however, needs. Further call attempts will result in the same error code. • Set ISDN protocol is wrong .	• Check ISDN protocol. If the protocol is correct, establish a test connection in the telephone mode to check the cleared services. If the connection can be established, the service 'Data transfer' is not cleared for the ISDN connection of the calling MusicTAXI. The service has to be cleared by the provider.

Error Codes	Possible Cause	Test Point/ Correction
• INVALID CALL REFERENCE VALUE • IDENTIFIED CHANNEL DOES NOT EXIST • CALL IDENTITY IN USE • INCOMPATIBLE DESTINATION • DEST. ADDRESS MISSING/ INCOMPLETE • INVALID TRANSIT NETWORK SELECTION • INVALID MESSAGE, UNSPECIFIED • MANDATORY ELEMENT MISSING • MESSAGE TYPE NOT IMPLEMENTED • ILLEGAL MESSAGE • INFORM. ELEMENT NOT IMPLEMENTED • INVALID INFORMATION ELEMENT • MESSAGE INCOMPATIBLE TO CALL STATE • RECOVERY ON TIMER EXPIRY • PROTOCOL ERROR, UNSPECIFIED	Generally a wrongly set ISDN protocol is the cause for the error code.	• Check set ISDN protocol and try again.
• " --- " **ONLY BY US-PROTOCOLS**	There is no error code from the ISDN net. It could be that the B-channel was disconnected by the MusicTAXI itself or the partner unit.	• Check entered ISDN number and try again.
• SPID REQUEST PENDING	The request for the SPID numbers has not yet been answered.	• Check SPID number and connection.
• SPID FAILED	SPID was rejected by the ISDN.	• Check SPID number and try again.
• ILLEGAL SPID	The entered SPID number is too short.	
• SPID MISSING	An US protocol has been selected, however, no SPID number entered.	• Enter SPID number and

Audio Compatibility

In order to establish a connection between a MusicTAXI, ZEPHYR and PRIMA the following configurations have to be set:

LAYER 2 with 64 kbps

MusicTAXI		ZEPHYR		CDQPRIMA	
ISDN SYNC:	NO SYNC	Compat:	ZEPHYR	Encoder:	Line FMT: 1LN
ALGORITHM:	LAYER 2	Xmt:	L2 Mono		Algorithm: MPEG L2
AUDIO MODE:	MONO	Rcv:	L2		Algo mode: Mono
DATA RATE:	64 kbps	Rate:	64 kbps		Bit rate: 64 or AUTO
DATA CHANNEL:	OFF			Decoder:	Line FMT: 1LN
					Indep: Yes
					Algorithm: MPEG L2
					Bit rate: 64 or AUTO
				or:	Speed dial: Nr. 25

LAYER 2 with 128 kbps

MusicTAXI		ZEPHYR		CDQPRIMA	
ISDN SYNC:	PRIMA	Compat:	ZEPHYR	Encoder:	Line FMT: CCS2 LN
ALGORITHM:	LAYER 2	Xmt:	L2 M/DM/JS		Algorithm: MPEG L2
AUDIO MODE:	MONO/	Rcv:	L2		Algo mode: M/DM/S/JS
	D. MONO/	Rate:	64 kbps		Bit rate: 128 or AUTO
	STEREO/			Decoder:	Line FMT: CCS2 LN
	J. STEREO				Indep: Yes
DATA RATE:	128 kbps				Algorithm: MPEG L2
DATA CHANNEL:	OFF				Bit rate: 128 or AUTO
				or:	Speed dial: Nr. 27

LAYER 3 with 64 kbps

MusicTAXI		ZEPHYR	
ISDN SYNC:	NO SYNC (INV)	Compat:	ZEPHYR
ALGORITHM:	LAYER 3	Xmt:	L3 Dual
AUDIO MODE:	MONO	Rcv:	L3 Mono
DATA RATE:	64 kbps	Rate:	64 kbps
DATA CHANNEL:	OFF		

LAYER 3 with 128 kbps

MusicTAXI		ZEPHYR	
ISDN SYNC:	ZEPHYR	Compat:	ZEPHYR
ALGORITHM:	LAYER 3	Xmt:	L3 Stereo/ Joint Stereo
AUDIO MODE:	DM/S/JS	Rcv:	L3 Stereo
DATA RATE:	128 kbps	Rate:	64 kbps
DATA CHANNEL:	OFF		

G.722 with 64 kbps

MusicTAXI		ZEPHYR		CDQPRIMA		
ISDN SYNC:	SRT	Compat:	ZEPHYR	Encoder:	Line FMT:	ILN
ALGORITHM:	G.722	Xmt:	G.722		Algorithm:	G.722
AUDIO MODE:	MONO	Rcv:	G.722		Algo mode:	M1
DATA RATE:	64 kbps	Rate:	64 kbps		Bit rate:	64 kbps
DATA CHANNEL:	OFF			Decoder:	Line FMT:	ILN
					Algorithm:	G.722
					Bit rate:	64 kbps

In Layer 2 and 3, you can only select the sampling rates 32 kHz or 48 kHz. The settings for both units have to be identical
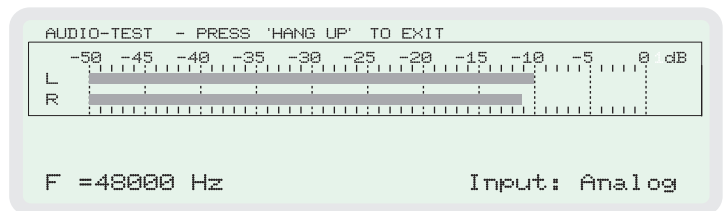
Number Codes

When the MusicTAXI is in standby mode, you can select from the main menu the following functions by entering certain number codes:

Audio Test (88888)

Audio loop without encoder/decoder.
By pressing the ENTER key you can change the audio input to AES/EBU or S/PDIF.

```
AUDIO-TEST  - PRESS 'HANG UP' TO EXIT
   -50  -45  -40  -35  -30  -25  -20  -15  -10  -5    0  dB
L
R


F =48000 Hz                        Input: Analog
```

By pressing 1, 2, 3 you can change the sampling frequency.
By pressing HANG up you leave the AUDIO TEST.

99999

Interrogation of the PAN-PRO software versions.

77777

Interrogation of the MusicTAXI's software version which is connected to the PAN-PRO.

Reset (3+6+9)

By pressing 3+6+9 simultaneously, reset will be started.

.

Technical Data **MusicTAXI PAN-PRO**	Desktop unit for remote operation of MusicTAXI SL-PRO or VP-PRO.
Dimensions	260 x 215 x 10/55 mm, weight approx. 2.5 kg
Operating Temperature	-10 ... +45 degrees Celsius, no fan
Relative Humidity	30 ... 90 %
Graphical Display	240 x 64 dots
Keypad	Numeric keypad
Power Supply	10 ... 30 V AC/DC, 0.70 ... 0.24 A, external power supply
Serial, Asynchronous Interfaces	Port 1: RS232/RS422 for remote control of MusicTAXI VP-/SL-PRO Port 2: RS232/RS422 for software downloading
Connection Control	Online Menu with the following displays: Peak level Tx (send), peak level Rx (receive), ISDN number of the connection, encoder configuration, decoder configuration, decoder SYNChronization of the partner codec, selected headroom adjustment, on-line connection time
Directory Entries	96 individual entries can be stored separately: name, ISDN number, audio configuration, ISDN SYNC mode (name of the partner codec)
	All technical alternations may be subject to change without notice.
Scope of Delivery	MusicTAXI PAN-PRO Mainy Power Supply with EURO connector Serial cable (KB017), length: 5m Manual for MusicTAXI PAN-PRO
MusicTAXI Test Number	Call the DIALOG4 test number +49 7141 22 66 22. Audio is permanently connected.
Maintenance and Hotline	The MusicTAXI PAN-PRO has no user-serviceable parts. In the case of possible technical problems, please contact our hotline: DIALOG4 Hotline: 01 80 - 5 25 74 28 CET: 9.00 to 18.00 hours