TagTrans®

With Bluetooth wireless Technology

Quick Start Guide

Rev 3.0

Introduction

Scanner Versions

This Quick Start Guide is valid for all TagTrans® and FlexiScan versions. FlexiScan® is mechanically different, but supports the firmware and software platform.

System Requirements

Recommended Operating System:

- Windows 2000 and higher

Recommended Bluetooth stacks for Windows:

- IVT BlueSoleil   www.bluesoleil.com
- Broadcom (Widcom)   www.broadcom.com
- Microsoft Windows XP   www.microsoft.com
  (WIN - only if PIN enabled)
- Toshiba Bluetooth stack   http://aps2.toshiba-tro.de/bluetooth

Recommended Bluetooth Adapter

- BT USB Adapter Parani UD100   www.sena.com
- BT-Serial Adapter Parani SD1000   www.sena.com
- BT-Serial // USB Adapter SD1000U   with ParaWin software
- http://www.senanetworks.com/products/industrial_bluetooth/sd1000u.php

Packing List

- TagTrans
- Battery (rechargeable)
- Charger with international plugs
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- Programming Manual and Softwaretools see supportsite:
- www.datatronic.eu/support/support_f.html

- BT adapter if ordered

About this Quick Start Guide

- This Quick Start Guide contains only the most basic setup instructions for the TagTrans you have ordered. For complete information refer to the Programming Manual.
- www.datatronic.eu/support/support_f.html

Hardware Preparation

The contact between electronic part and battery pack is covered with a isolation foil during transport to avoid that the TagTrans switches on by error.
Remove this foil to start operation.
The battery pack locks to the electronic part with bayonet pins which opens if you turn both parts against each other.

Charging the Battery

Use only the charger provided to charge the battery.
The *charger status LED* will emit a solid orange light while charging, and turns green when the battery is fully charged.
If the TagTrans is attached to the battery during the charging process the *LED on the TagTrans* shines green.

Installing the Battery

Fit the **TagTrans** and the battery unit together by aligning the white points, see the illustration below.
Warning: Incorrect alignment of the Tagtrans and battery may result in damage to the casing of either the battery or the Tagtrans. Do not use excessive force to close the housings.

Setup Instructions

Follow these instructions to set up the TagTrans for use with a **Bluetooth enabled** PC running Windows.
Before you begin with the instructions below, make sure you have installed and charged the battery.

First Startup

As soon as the main housing is connected with the battery, the **TagTrans** is sequentially supplied; starting from this point several operating modes are possible. A beep signal and a green light on the first LED show that the unit is powered and the battery is sufficiently charged.

You can distinguish between several operating modes:

> *Connection establishment*
> *Full enterprise mode*
> *Stand by mode*
> *Sleep mode*

Status Indicator LED's and Beep signals

The TagTrans is equipped with two LED's and a beeper to allow an easier communication with the device.

The *first LED* is the **battery condition indicator**. To get the exact battery status, see settings: "get bat". If the battery is fully charged, the LED shines **green**. If this LED shines **orange**, the battery conditions are moderate to low. If the LED flashes some second **red** the battery must be charged.

The *second LED* indicates the **communication status**. It is **blue** when the Bluetooth connection is established. During a communication with the reader it blinks **blue** and **red** simultaneously.

The *beeper* signals "**powered**" and "**connected**".

If the TagTrans is equipped with an **Imager** the *beeper* indicates the reading of a Barcode and concurrently the *first* and *second LED* blinks **green and blue** simultaneously.

Setup the connection to your host

The TagTrans is connected via an industrial Bluetooth and should appear on your device, PC or mobile device, soon after the start up. You will be asked for the **Pin Code** (default pin = 1234, to change the pin or disable it see Settings / Commands), so the unit can be paired to the host.

The **Bluetooth software** will set up a virtual com-port. You can use this com-port to set up a communication between the RFID-Reader and your chosen program(s) e.g. HyperTerminal. As soon as the TagTrans is paired and the Bluetooth/serial connection is completed to a host, there is a second beep signal and the LED that indicates the communication status lights up blue.

Now the TagTrans is connected. You can use all common programs to communicate with the reader.

In order to **preserve battery life** the unit will go to sleep (Sleep mode) after a period of being idle (Stand by Mode). The Stand by Mode is configurable. (timeouts see settings: t1 – t3). The unit can be woken up from Sleep Mode in Stand by Mode by shaking it.

If you don't move the unit or read tags or send commands for 60 seconds the TagTrans switches off and changes into sleep Mode. To retrigger the unit you need to shake the TagTrans. It restarts and reconnects to the host automatically.

Basically **2 movement types** can be detected automatically:

1. "free fall": e.g. Pivot the TagTrans device from below to above or from top to bottom.
2. "Punch or kick": (simple or double) a double "tap" of the TagTrans with the fingers within half a second or. e.g. 360 ° rotation around the longitudinal axis within a tenth second

Settings

It is possible to see and change settings of your TagTrans unit. For this you have to set up a connection using HyperTerminal.

The *commands* for the TagTrans settings always start with a **"%"**-character and need to be sent/confirmed by pressing "*carriage return*", otherwise it is misunderstood as a reader-command and does not reach the microcontroller of the TagTrans.
The default communication parameters could be changed with a terminal program:
LF, HF and BC2 TagTrans: 9600, N, 1, 0
UHF TagTrans 115200, N, 1; 0

To get a list of all the settings/commands and the firmware versions of the TagTrans send **"%help":**

More details see Programming Manual: www.datatronic.eu/support/support_f.html

Input *%help*	Output instruction list
	%TagTrans HW 2.2 SW 0.12.4 HF 3AMS Build Time Apr 29 2010 11:48:13
	%get to ... get timeouts
	toff actual time until power off
	troff actual time until reader off
	t1 timeout power off
	t2 retrigger time power off
	t3 retrigger time reader off
	%set t1 xxxxx ... set timeout power off to xxxxx seconds
	%set t2 xxxxx ... set retrigger time power off to xxxxx seconds
	%set t3 xxxxx ... set retrigger time reader off to xxxxx seconds
	%set factdef [rf/tt/bt] ... set TagTrans to factory default
	%get bat/bth ... get battery level/thresholds
	%set pin xxxx ... set pin (max 16 digits)
	%set name xxxx ... add string to friendly name (max 32 digits)
	%get acon ... get state of auto connect
	%set acon on/off ... set auto connect on/off
	%del pair ... delete pairing
	%set msg on/off ... set message on/off
	%beep volume[0-3] frequency[10Hz] duration[0.1s]
	%blink help ... lists blink commands
	%get br ... get actual baud rate
	%set br xxx ... set baud rate to xxx
	47 -> 9600, 23 -> 19200, 11 -> 38400,
	7 -> 57600, 3 -> 115200
	%ax help ... lists 3axis motion sensor commands
	%off [nowake] ... power down

How to read HF and LF transponder and Barcode

1. As soon as the TagTrans is connected via BlueTooth, Barcode and the UID of LF and HF transponders is transmitted at the virtual COM port which was opened by the BlueTooth stack.

2. Diversion.exe „HID" Mode / Keyboardwedge

Download this program from our supportsite.

- www.datatronic.eu/support/support_f.html

Install the software, it will copy the COM-Port data to the keyboard buffer.
e.g. Barcodedata can be directly inserted in an Excel table or in your application at the prompt position of your cursor.

3. Application programs to read and write in transponder memories

La Download this program from our supportsite.

- www.datatronic.eu/support/support_f.html

e.g. „Reader Utility" or "PC_Universal_Demo" or "ISO 15693 Coding Application"
t

How to read UHF transponder

4. "EasyController_Software" for Windows Setup_1_4_3

Download this program from our supportsite.

- www.datatronic.eu/support/support_f.html

Take care that the TagTrans is connected via Bluetooth with parameters:
115.200, N, 1, 0
Install the software and connect to the virtual COM Port which was assigned from the Bluetooth stack..
Start „Inventory"
Place the UHF tranponder close tot he TagTrans.
The TagTrans antenna has a linear polarisation, therefor reading distances depend on orientation and alignement of the transponder.

5. Handy App "CAEN EasyController" Software for Android and IOS

Download this program from Play store

For Android: EasyController.apk
Download this program from our supportsite

- www.datatronic.eu/support/support_f.html

For IOS write to mail@datatronic.eu

Common Commands Overview for the RFID Reader HF1, HF2, LF

Following table describes the most common commands used for the reader. Each command returns an answer to the host.

'c'	Continuous read
'.'	Abort continuous read, refer to continuous read
'r' / 'rb'	Read block For example: *Read Block 01* > r01 *Output Data* < 01234567
's'	Select
'w' / 'wb'	Write block For example: *Write on Block 01 "Data"* > w01c061a293 *Output written Data on Block 01* < c061a293
'x'	Reset
'y'	Field reset

Example of commands read / write

To read certain blocks from a tag (chip) it has to be selected (s…select) in the reading field. Then the read or write command can be entered with the appropriate block number (address). The answer appears one row under. During the read / write process the Tag may not be removed from the field of the reader.

Read-Syntax:

„s"	command (select)
E0040100067843CF	answer (UID)

"rb05"	command to read block 05
00000000	answer (content of block 05)

Write-Syntax:

„s"	command (select)
E0040100067843CF	answer (UID)

„wb0512345678"	command to write to block 05 12345678
12345678	answer (new content of block 05)

Support: Please send any questions to sa@datatronic.eu.