

Transponder:

TRA, TRA.ROT, TRA.SCHALT, TRA.PWD

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Content

1.0	General Instructions	3
	Safety instructions.....	3
1.2	Product description	4
1.1	Higher Priority Locking Level	5
2.0	Special Models	6
2.1	Password Transponder	6
2.2	Switching Transponder	6
2.3	Explosion-Proof Transponder	6
2.4	Transponder, Sealed.....	6
2.5	Transponder, Sequentially Numbered.....	6
3.0	Explosion-Proof Standards	7
3.1	General Information	7
3.2	Standards.....	7
3.3	Grouping	7
4.0	Additional Functions.....	8
4.1	Time Zone Control	8
4.2	Validity Date.....	8
4.3	Activation Transponder.....	8
5.0	Battery Replacement.....	9
5.1	Standard, Switching, and Password Transponders.....	9
5.2	Battery Replacement for the Explosion Protection Transponder ...	9
6.0	Loss of the Transponder	9
6.1	Emergency Opening	9
6.2	Replacement Transponder.....	9
7.0	Programming and Reading the Transponder	9
7.1	Programming a Transponder.....	10
7.2	Reading a Transponder	10
8.0	Data Sheet.....	11

1.0 General Instructions

Please take 15 minutes to familiarize yourself with how your Transponder works with the help of these operating instructions.

Compliance Statement (Part 15.19)

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Warning (Part 15.21)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Interference Statement (Part 15.105 (b))

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

Industry Canada Statement per Section 4.0 of RSP-100

The term "IC:" before the certification / registration number only signifies that the Industry Canada technical specifications were met.

Section 7.1.5 of RSS-GEN

Operation is subject to the following two conditions:

- 1) this device may not cause harmful interference, and
- 2) this device must accept any interference received, including interference that may cause undesired operation.

Safety instructions

- Caution! – The batteries used in this product could burn or cause a fire if they are not handled properly. Do not charge, open or burn these batteries or heat to over 100°C.
- SimonsVoss Technologies, Inc. is not liable for any damage caused by incorrect programming.
- An incorrectly programmed or faulty transponder can block access through a door. SimonsVoss Technologies, Inc. is not liable for the consequences of such an occurrence, such as blocked access to persons who are injured or in danger, material damage or any other damage.

1.2 Product description

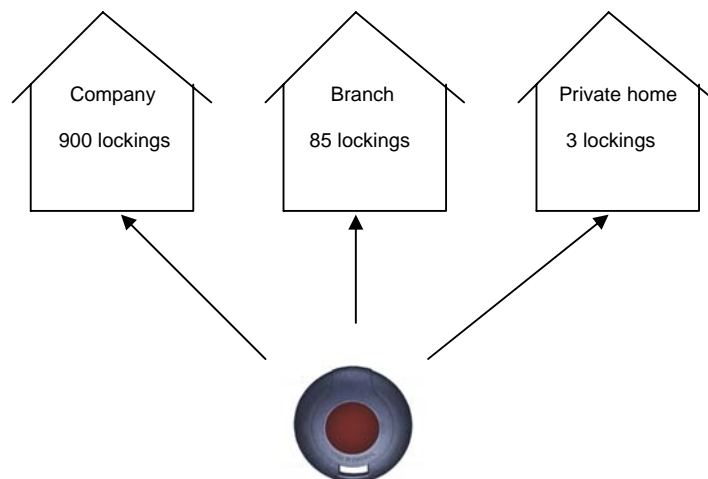


The Transponder is activated when the user presses the button in the center of the device. This device communicates an identity code to a SimonsVoss RF Lock or SmartRelay through an encrypted, rolling-code radio signal. If the identification corresponds with one that is authorized, the lock is unlocked or the SmartRelay is activated. The color of the button on the transponder has no significance beyond appearance.

Since the Transponder's communication is encrypted, it must be synchronized to the locks with a common encryption signature. This is accomplished when it is programmed with the configuration tool connected to the software used to define the lock system.

Each Transponder has the ability to support up to three unique lock systems independently. This means that the user can use the same transponder on up to three different lock systems even if each lock system has a different system administrator that has no communication with the other two administrators.

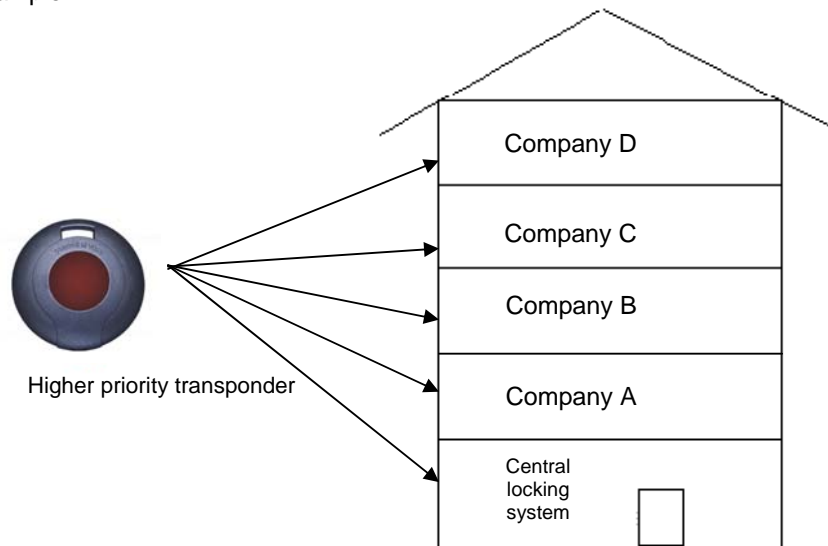
Example:



1.1 Higher Priority Locking Level

If it is necessary to have transponders that are authorized for more than 3 mutually independent lock systems, "higher priority lock levels" must be set up in these lock systems. A maximum of 3 higher priority locking levels are available for this. All transponders of a higher priority locking level have the same authorization. One digital lock distinguishes between a maximum of three higher priority levels.

Example:



In this example, four companies are accommodated in an office building with a central lock that is used by all the companies. Each company administers its own lock system with its own password. Every employee receives a transponder that is authorized for 2 lock systems, namely the central lock and his or her own company.

However, the fire department, for example, needs a transponder that is authorized for all five of the building's lock systems. To accomplish this, a higher priority lock level with the same password must be set up in all five lock systems and the authorizations must be set up for the higher priority transponders. The transponders set up in this level all have the same authorization. If higher priority transponders with other authorizations are required, an additional higher priority lock level must be set up (max. 3 higher priority lock levels per lock!). The higher priority transponder must then be programmed into all [shutdowns](#) of all 5 lock systems.

2.0 Special Models

2.1 Password Transponder

Instead of manually entering the locking system password, you can transmit it over radio frequency with the help of a special transponder. Standard transponders cannot be used as password transponders.

The Password Transponder is special version that sends an encoded password rather than an ID. The purpose of this device is to allow a system administrator to temporarily authorize someone to use the programming software without actually disclosing the password. The way this works is that the administrator encodes the password into this special transponder and then gives the transponder to the temporary operator. When the system requests the password, the new operator presses the button on the password transponder and the required password is sent to the software with the SmartCD configuration tool acting as the reader. When the temporary operator has completed his or her tasks and returns the password transponder, that person no longer has access and the system administrator does not have to worry that the password was compromised.

Warning: If the Password Transponder is ever programmed as a normal Transponder, it can never again be used as a Password Transponder.

2.2 Switching Transponder

The Switching Transponder is identical to the Transponder with the addition of two wires connected in parallel to the button on the device. These wires allow a third-party electronic system to activate the Switching Transponder as if someone had pressed the button. The button on the Switching Transponder remains usable.

2.3 Explosion-Proof Transponder

This is a transponder with the same functions as the standard transponder, but in addition, this transponder can safely be used in an explosion protection zone 1. (Note Chapter 3 in this regard).

2.4 Transponder, Sealed

This is the standard transponder as described above, but with the case glued shut. This prevents end-users from opening the case and using the transponder electronics improperly, but this also eliminates battery replacement so that the lifespan of the device is limited to the 1 million operations expected from the original battery.

2.5 Transponder, Sequentially Numbered

Sequentially numbered transponders can also be ordered if required.

3.0 Explosion-Proof Standards

3.1 General Information

This special product is a transponder that is permitted to be carried into and used in areas subject to explosion hazards, called Zone 1. An area is denoted as Zone 1 when atmospheres capable of exploding occur occasionally. It is crucial that you keep in mind the following issues:

- The user is not permitted to open the housing.
- Unlike the standard Transponder, only SimonsVoss Technologies AG is permitted to change the battery.
- Normally, you must comply with the general operating instructions of the BGR132 (German rules for occupational safety and health) when using the device in Zone 1.

3.2 Standards

The transponder has been tested according to the applicable explosion protection standards. Refer to:

- Directive 94/9/EC
- DIN EN 50014 (Electrical apparatus for potentially explosive atmospheres)
- DIN EN 50020 (Intrinsic safety "i")

3.3 Grouping

The transponder is grouped in the following way:

- Explosion protection: zone 1
- Intrinsic safety: ib
- Explosion group: IIC
- Temperature class: T3
- Device group: II2 G

This applies to areas in which a potentially explosive atmosphere can arise due to gases, vapors or mists. The information quoted relates to an ambient temperature of from -4°F to +104°F (-20°C to +40°C) where the transponder is used.

4.0 Additional Functions

The following functions can be activated in the lock plan software:

4.1 Time Zone Control

If the Time Zone Control has been enabled in the SimonsVoss RF locks, you can program transponders that have lock authorization for specific times only. These time zones are deposited in the lock plan software, and the transponders are then assigned to an appropriate time zone group.

Example: Mr. Miller receives the following authorization:

Monday to Friday	from 9:00 am, until 6:30 p.m.
Saturday	from 9:00 am, until 12:45 p.m.
Sunday	no authorization

4.2 Validity Date

It is possible to program transponders whose authorization is tied to a validity date:

- Transponders that are valid **from a specific point in time**
(i.e. from 8:00 a.m. on July 12, 2003)
- Transponders that are valid **up to a specific point in time**
(i.e. until 5:00 p.m. on July 12, 2003)
- Transponders that are valid **for a specific time interval**
(i.e. from July 1, 2003 until July 31, 2003)

Note: One data record is assigned for each activation or expiration date!

4.3 Activation Transponder

Within the scope of the block lock function, all authorized transponders for a SimonsVoss RF lock in the security area are blocked when the alarm system has been activated in order to avoid false alarms. For emergency situations, transponders can be programmed (for example, for the fire department) that release this block. Afterwards, the door can be opened with an authorized transponder.

5.0 Battery Replacement

5.1 Standard, Switching, and Password Transponders

It is possible to damage the transponder if battery replacement is handled incorrectly. This procedure should only be attempted by a trained electronic technician. If it takes you longer than two minutes or if the battery terminals are shorted, the data in the transponder will be lost and the transponder must be reprogrammed.

Before opening the transponder make sure that you are electrically grounded with an approved anti-static heel or wrist strap. Electrostatic discharge can destroy or shorten the life of a transponder. The SimonsVoss Technologies, Inc warranty does not cover damage caused by improper battery replacement.

To replace the batteries, gently pry the case apart by inserting a fingernail or knife blade into the seam at the “equator” of the device. When the case has been opened you will see the battery held to the board by a clip.

Orient the device so that the keychain hole is at the top and the antenna is to your right.

Remove the clip by gently pressing on the bottom of the clip while sliding it to the left. The bottom of the clip should then be able to be pulled up and away from the board, allowing the battery to be removed.

When inserting the new battery, make sure that the polarity is correct with the positive terminal up (the large side with the writing is the positive terminal).

Replace the retaining clip being sure to press gently and slide it to the right to re-engage the tension on the battery.

Replace the cover on the transponder. Read the transponder to verify that the data is still intact.

5.2 Battery Replacement for the Explosion Protection Transponder

Attention:

Only SimonsVoss Technologies, AG is permitted to change the battery for an Explosion Proof Transponder! Any attempt to change the battery outside SimonsVoss production facilities voids its use as an explosion-proof device.

6.0 Loss of the Transponder

6.1 Emergency Opening

An emergency opening can be carried out using the SmartCD + PDA (only use devices approved by SimonsVoss) and knowledge of the lock system password.

6.2 Replacement Transponder

If a transponder is lost, it can be deleted from the lock plan and a replacement transponder can be set up. When operating the lock system in overlay mode, the lost transponder is automatically blocked as soon as the replacement transponder is activated at the RF lock.

7.0 Programming and Reading the Transponder

See the appropriate software manual to learn the details of how to program and read the transponder but the following should be helpful.

7.1 Programming a Transponder

Before it can be used with a lock system, the Transponder must be programmed. This programming is necessary to give it the identification code assigned by the lock system and to give it the encryption key appropriate to that system.

Before you can program a transponder you must be authorized to do so. This is accomplished in the SimonsVoss software by selecting the function titled Authorize Transponder Programming and providing the appropriate password.

To program a transponder, it must be placed within 18 inches but no closer than four inches to the configuration tool, which is connected to the computer running the programming software. In the SimonsVoss software select the transponder you want to program on the lock plan by left-clicking on the transponder name; resulting in that transponder being highlighted.

Select the function titled Program Transponder. A dialog will appear and you should confirm that the appropriate transponder is indicated before pressing the Program button. If for some reason, the transponder listed is not the correct one, simply select the correct one from the combo box before proceeding. The software will then direct you to press the button on the transponder one or more times. Follow the instructions and the software will tell you whether the procedure was successful or not.

If it was not successful, the reasons may be one of the following:

- 1) The transponder was too close to the configuration tool – move the transponder at least 4 inches away from the configuration tool and try again.
- 2) The transponder has already been programmed for three different systems – to use with this system the transponder must be reset (losing the other programming information).
- 3) There is too much RF interference – move the computer, configuration tool, and transponder to another location and try again.

7.2 Reading a Transponder

Before it can be used with a lock system, the Transponder must be programmed. This programming is necessary to give it the identification code assigned by the lock system and to give it the encryption key appropriate to that system.

After the lock has been programmed, the Transponder can be read and will disclose the user name and time restrictions, if any. If the Transponder is unknown to the lock system, reading it will result in the display of the SID (system identification) and TID (transponder identification).

In order to read a transponder, select the Read Transponder function in either the LDB or LSM software. This function will direct you to press the button on the Transponder and will then display the result.

8.0 Data Sheet

Dimensions: H x W x D	1.7 in diameter x 0.5 in thick (42 mm diameter x 13 mm thick)
Weight	0.5 oz (15 g)
Color	Dark Grey, with blue button
Operating distance, RF Locks	approx. 16 inches (40 cm) if the transponder, lengthways, is held parallel with the RF Lock antenna
Operating distance, SmartRelay	approx. 47 inches (120 cm) if the transponder is parallel with the antenna of the SmartRelay
Protection category	IP 54 (NEMA 3S)
Operating temperature range	-4°F to 104°F (-20°C to 40°C) Noncondensing
Battery type	3 V DC lithium battery type CR2032