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TRS-5000 EVO
MANUAL DE INSTRUCCIONES

TRS-5000 EVO
INSTRUCTION MANUAL

TRS-5000 EVO
ANWEISUNGSHANDBUCH

TRS-5000 EVO
MANUALE D'ISTRUZIONE

TRS-5000 EVO
NOTICE D'UTILISATION

TRS-5000 EVO
MANUAL DE INSTRUÇÕES

TRS-5000 EVO
INSTRUKCJA OBSŁUGI

Insert key
Press READ

READ COPY

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TRS-5000 EVO

TRS- 5000 EVO

KEY CUTTING MACHINE

TRS-5000 EVO

INSTRUCTION MANUAL

1. PRESENTATION AND GENERAL ASPECTS

1.1 GENERAL ASPECTS

Following the evolution of the TRS family, the launch of the new TRS5000 EVO is presented.

As such, and taking the renowned and successful TRS5000 as a base, a more robust and compact machine has been developed that clones most of the encrypted and fixed, automatic and PC mode transponder families available on the market:

- Megamos fixed code
- Temic fixed code
- Nova fixed code
- Philips fixed and encrypted code
- Texas fixed and encrypted code

This evolution is true to the philosophy for the entire TRS range, which can be translated as "the simpler the better for the user".
In line with this maxim, the TRS EVO still has the usual READ/COPY buttons present in the entire range.

In this new evolution, JMA has worked considerably on the te-chnical simplification of the solution provided as a whole (TRS5000+TPXCloner+TPHCloner).
In fact, substantial effort has been made to compact all the external hardware and cabling used previously (TPX Cloner + TPH Cloner) whose functionality is supplied with the codes that bear the original keys from the Texas and Philips Crypto families respectively, in one unit.

1.2 TRANSPORT AND PACKAGING
The machine is supplied protected by polystyrene packing and inside a cardboard box with the following dimensions and weight:

- Width = 275 mm.
- Length = 320 mm.
- Height = 170 mm.
- Weight = 550 g.

When unpacking the machine, check carefully to see if it has been damaged during transportation. If you find any problems, please contact Altuna JMA Group's technical or customer service department and do not use the machine.

2.TECHNICAL SPECIFICATIONS

The TRS–5000 EVO duplicating machine, in addition to offering the same and the complete reading and cloning range of the main transponder manufacturers, offers complete information on the detail of these readings.

Also, with the compacting of the product (integration of the two external cloners (TPX+TPH), on a single plate) the errors have been suppressed that are often generated by the client when connecting between the different devices (TRS TPH TPX).

The machine is updated using the upper USB port (known as the TR).

The other USB port (known as the CL), is enabled for updating the new compact Cloner (TPX+TPH), so that new vehicle models can be easily added for later cloning.

2.1 THE MACHINE'S SUPPLEMENTARY ELEMENTS

After unpacking the TRS-5000 EVO duplicating machine, the following components should be found:
- Power supply 100-240 Vac / 50-60 Hz and 9V / 2.5 A.
- USB cable type A-B (1.5 m long), for interconnection between the PC and the TRS 5000-EVO.

- Instructions manual.
- TPX4 support (two units).

2.2 THE MACHINE'S MAIN ELEMENTS

- Two push buttons (READ and COPY).
- One on/off switch.
- One female DB9 connector for future RS 232 series line connections.
- Two USB connectors (CL for CLoner and TR for TRS5000 EVO).
- One DC power supply connector.
- One 4x20 character alphanumeric display.

3. STARTING THE MACHINE

3.1 SITUATING THE APPLIANCE

Once the machine has been carefully unpacked, it must be placed on a surface that is not made of metal or any other material that may generate electromagnetic interference when reading, given that the antenna is the most sensitive area to interferences and therefore to the metal components that distort the signal captured from the key as well as the tuning frequency.

As an example:
A correct location for situating the machine may be a wooden desk.
It must also be taken into account that the machine must be situated at a distance of at least between 80 and 100 cm from any electromagnetic interference source (operator screens, televisions, electrical communication elements, motors, walky-talkies, mobile phones, etc.).
3.2 Installing and fitting the equipment
One positioned correctly, all the material received with the appliance can be installed.

To do this, proceed as follows:
1. Check that the material in the box received from the manufacturer is in accordance with point 2.1 of this manual in reference to the elements the machine includes.
2. Check there is a 110/220V power socket available in the premises and that the power supply received is correct: 100-240 Vac / 50-60Hz and 9V /2A.
 Connect the power supply to the TRS-EVO.

The inclusion of the (4x20) alphanumeric display on the TRS-EVO enables reading of all the transponders to be optimised, thus offering detailed and complete information about them.
Following, and to summarise, the attached table shows the messages that appear when reading an original key as well as the transponder to be inserted for cloning the key.

REF. JMA	RESULT ON TRS5000	ACTUAL TRANSPONDER
TP01	TP01 Philips Fixed Copy on TP05/01	Philips code Fixed Wedge format
	ID 30C7F1FF07F0E3C7 711C07FEE3FF7F00	Code example on TP01 / ID 33
TP02	TP02 Texas Fixed Copy on TPX1	Texas Code Fixed Glass format 23 mm
	TI ID 00007E62409A00 0000000074717E0000	Code example on a TP02 / ID 4C
TP03	TP03 Megamos fixed code Copy on TP05	Megamos code Fixed Glass 13 mm
	ID FF81342019B9C710 FF81342019B9C710	Code example on a TP03 / ID 13
TP04	TP04 Temic fixed code Copy on TP05	Temic code Fixed Wedge format
	ID 9E8D77DF4000001C 9E8D77DF4000001C	Code example on a TP04 / ID 11-12

REF. JMA	RESULT ON TRS5000	ACTUAL TRANSPONDER
TP05	TP05 Nova fixed Copy on TP05	Nova code Fixed Wedge format (Universal TP of copy for fixed codes) (Except Texas)
	ID BBBBFFFFFFFFFFFF FFFFFFFFFFFFFFFF	Code example on a TP05 / ID 23
TP06	TTP06/19 Texas Crypto Copy on TPX2	Texas Code Crypto. Glass 23 mm
	PW: FF ID: 00 859F11 MC: 11 LCK: 0010 DST40	Code example on a TP06-19 / ID 4D-60
TP07	TP02 Texas Fixed Copy on TPX1	Texas Code Fixed Wedge format Read = TP02.
	TI ID 00007E62409A00 0000000074717E0000	Code example on a TP07 / ID 4C
TP08	LCK TP08 Megamos Cry. Mire manual TP	Megamos Code Glass Crypto 13 mm
	UM1 A1618765 WD1-WD0	Code example on a TP08 / ID 48
TP09	TP09 Phil Crypto OP Copy on TP05	Philips Code Crypto first generation OPEL load
	30007E00008E03F8 8F1F380EE0FF0F1C	Code example on a TP09 / ID 40
	TP09 Phil Crypto OP Cannot be duplicated	Philips Code Crypto first generation OPEL load
	30FF7F0000801FF8 FF1F0700E0FF0F1C	Code example on a TP09 / ID 40
TP10	TP10 Phil Cry WS Copy on TPH1	Philips Code Crypto first generation VW code
	ID 30F871E0C7FF033F FE1F000000000000	Code example on a TP10 / ID 42
TP11	LCK TP08 Megamos Cry. Mire manual TP	Megamos Code Crypto. Wedge format
	ID CA06662B TP08 MGI UM1 A9C08765 WD1-WD0	Code example on a TP11 / ID 48A
TP12	TP12 Philips Crypto Copy onTPX4	Philips Code Crypto. PSA-HYU-KIA-HON
	ID EF791717 MODE LCK MANCHESTER	Code example on a TP12 / ID 46
TP13	TP13 Phil Cry NISSAN Copy on TPH1	Philips Code Crypto. first generation NISSAN load
	ID 3007EFF3F001C07 FEFF3F001CF88F1F	Code example on a TP12 / ID 46
TP14	TP14 Phil Cry VOLKSW Copy on TPH1	Philips Code Crypto second generation VW
	ID AA03554E4C4F434B 000000000030F0303	Code example on a TP14 / ID 44
	TP14 Phil Cry VOLKSW Cannot be duplicated	Philips Code Crypto second generation VW
	ID AA054C4F434B4544 00000000007FF0303	Code example on a TP14 / ID 44
TP16	TP16 Phil Cry PG Copy on TPH1	Philips Code Crypto first generation PEUGEOT
	ID FFFFFFFFFF30021F 8F32C3FFFFFFFFFF	Code example on a TP16 / ID 45
TP17	TP17 Temic Crypto. Mire manual TP	Temic code Crypto. Wedge. Mazda/Ford
	ID D41208B5D41208B5	Code example on a TP17 / ID 8C
TP18	TP18 MOTOROLA Mire manual TP	Motorola Indala (Lincoln MARK VIII)

REF. JMA	RESULT ON TRS5000	ACTUAL TRANSPONDER
TP19	TP06/19 Texas Crypto Copy on TPX2.	Texas Code Crypto. Wedge format
	PW: FF ID: 00 C11520 MC: 0B LCK: 0010 DST40	Code example on a TP06-19 / ID 4D-60
TP20	TP20 Texas Cry. FORD Copy on TPX2	Texas Code Crypto. Wedge format FORD
	PW: 03 ID: 00 2FAC03 MC: 01 LCK: 0010 DST40	Code example on a TP20 / ID 4D-63
TP21	TP21 Texas Cry. REN. Copy on TPX2	Texas Code Crypto. Wedge. RENAULT/JEEP/CHRYSLER
	PW: FF ID: 00 DD7D11 MC: 10 LCK: 0010 DST40	Code example on a TP21 / ID 4D-64
TP22	TP22 Meg Cry SEAT Mire manual TP	Megamos Code Special crypto. SEAT 2005
	UM1 E04EC658 WD1-WD0 UM2 BC38D0002A5112B3	Code example on a TP22 / ID 48
TP23	TP23 Meg Cry VOLKSW Mire manual TP	Megamos Code Special crypto. VW 2005
	UM1 E04EC658 WD1-WD0 UM2 BC38D0002A5112B3	Code example on a TP23 / ID 48
TP24	TP24 Meg Cry SKODA Mire manual TP	Megamos Code Special crypto. SKODA 2005
	UM1 E04EC658 WD1-WD0 UM2 BC38D0002A5112B3	Code example on a TP24 / ID 48
TP25	TP25 Meg Cry AUDI Mire manual TP	Megamos Code Special crypto. AUDI 2005
	UM1 E04EC658 WD1-WD0 UM2 BC38D0002A5112B3	Code example on a TP25 / ID 48
TP26	TP26 Texas Cry MIT Copy on TPX2.	Texas Code Crypto. Wedge. MITSU-BISHI
	PW: 19 ID: 00 3D4752 MC: 05 LCK: 0010 DST40	Code example on a TP26 / ID 4D-61
TP27	TP27 Texas Cry SUZ Copy on TPX2.	Texas Code Crypto. Wedge format SUZUKI
	MC: 10 LCK: 1010 DST40	Code example on a TP27 / ID 4D-65
TP28	TP28 Tex Cry MIT2 Copy on TPX2.	Texas Code Crypto. Wedge. MITSU-BISHI 2
	PW: FF ID: 00 E6820B MC: 11 LCK: 1010 DST40	Code example on a TP28 / ID 4D-62
TP29	TP29 Tx Cry LX/TOY Copy on TPX2.	Texas Code Crypto. Wedge. LEXUS/TOYOTA
	PW: B0 ID: 65 7F6949 MC: 14 LCK: 1111 DST40	Code example on a TP29 / ID 4D-68
TP30	TP30 Tx Cry TOY/SC Copy on TPX2.	Texas Code Crypto. Wedge. TOYOTA/SCION
	PW: B2 ID: 31 61F846 MC: 12 LCK: 1111 DST40	Code example on a TP30 / ID 4D-67
TP31	TP31 Tx Cr YAMAHA Copy on TPX2.	Texas Code Crypto. Wedge format YAMAHA
	PW: FF ID: 00 590600 MC: 13 LCK: 0011 DST40	Code example on a TP31 / ID 69
TP32	TP32 SOKYMAT Crypto Mire manual TP	Megamos Code Crypto. 2nd generation wedge HONDA/AUDI
	ID 0000000000000000	Code example on a TP26 / ID 4D-61

REF. JMA	RESULT ON TRS5000	ACTUAL TRANSPONDER
TP33	TP33 Texas-Cry 3GEN FORD-Copy onTPX2.	Texas Code Crypto. 2Gen. Wedge. FORD
	PW: 03 ID: 80 81DCBE MC: 01 LCK: 0010 DST40	Code example on a TP33 / ID 6F-63
	TP33 Texas-Cry 3GEN FORD-Mire manual TP	Texas Code Crypto. 3Gen. Wedge. FORD
	PW: 03 ID: 80 FB4FA6 MC: 01 LCK: 0010 DST80	Code example on a TP33 / ID XX
TP34	TP34 Texas-Cry 3GEN TOYO-Mire Man.TP	Texas Code Crypto. 2Gen. Wedge. TOYOTA
	PW: 37 ID: 96 3DF27F MC: 80 LCK: 1111 DST40	Code example on a TP34 / ID XX
	TEXAS CRYPTO ++ MIRE MANUAL TP	Texas Code Crypto. 3Gen. Wedge. TOYOTA
	PW: 36 ID: 98 FAA182 MC: 80 LCK: 1111 DST80	CODE EXAMPLE ON A TP34 / ID XX
TP35	TP35 Texas-Cry 3GEN TOYO-Copy onTPX2	TEXAS CODE CRYPTO. 2GEN. WEDGE TOYOTA
	PW: 33 ID: 0F 348CBC MC: 0C LCK: 1111 DST40	Code example on a TP35 / ID 6F-70

If the key entered has a first generation Texas Crypto transponder that is not recognised by the TRS EVO and thus does not appear in the above table, the display will show the following message:

TEXAS CRYPTO COPY ONTPX2	TTEXAS CODE CRYPTO. WEDGE FORMAT.
PW: 00 ID: 00 30B5B9 MC: 02 LCK: 0010 DST40	Code example on a TPXX / ID 6F-XX

⚠ **The TPX1 and TPX4 can be programmed as many times as desired. This is not the case with the TPX2. Because it is an OTP (one time programmable) transponder, it can only be recorded once, after which it will be disabled for future copies on the same transponder.**

Similarly: if the key entered does not have a transponder, the display will show the following advice message:

**NO CHIP
NO TRANSPONDER**

⚠ **It must be mentioned that some high range cars, BMW, MERCEDES use a rolling code system (evolutionarily encrypted), from the appearance of the first vehicles from around 1995, and although the machine shows that the copy is possible, this cloning will not be valid because the codes constantly evolve following an unknown protocol. Avoid duplicating the keys for vehicles with manufacturing dates after 1995.**

4 .COPYING KEYS

The steps to be followed in order to make a copy are:

4.1 LOCAL MODE WITH NO PC CONNECTION

•After entering the customer's original key in the antenna housing, press the read button. A message will appear advising the transponder's JMA type-reference that contains the original key read, as well as the transponder on which JMA advises the duplicate.
Covers all fixed and most encrypted transponders (Texas/Philips). If the transponders were encrypted from other brands such as Megamos or Temic, the device will show the transponder's identification with its JMA reference and will advise how to proceed to activate the key, generally redirecting to the transponder's manual and the use of a programming machine (TRACK7).
•Next, and following the step-by-step indications on the display, the key is removed and the new key entered on which the copy will be made together with its corresponding transponder.
When making the copy, it is advisable to enter the key in a non-mechanical manner, since due to the shavings or burrs that may remain on the key that may interfere with the equipment's electronics if they fall through the antenna or because the copy may be defective, it is preferable to cut the key after successfully completing this section.
•Once the copy has been made, the device itself will indicate whether the key is correct or erroneous.
In the case that more than one copy of the same key is required, repeat all the steps in the previous paragraphs, keeping in mind that it is advisable to use the original key provided by the customer as the base and the exact transponder with the reference recommended by JMA as the "copy base". The only exception is for the Philips Crypto, for which as many copies as desired can be made without having to go through the entire process again.

4.1.1 INFORMATION VISIBLE ON THE DISPLAY IN LOCAL CONNECTION MODE

When cloning the encrypted transponders, Texas as well as Philips, there is no need for a connection to the PC or to the external cloning device coupling (TPX Cloner + TPH Cloner), given that in the TRS EVO's new and compact design, all functionalities have been included in one unit.

During initialisation, the following messages will be shown on the display:

**JMA TRS-5000 EVO
S/N: 0123456789ABCDEF
FWR: XX
CLR: TPX CLONER FOUND**

The three first rows show the name, serial number and firmware version of the TRS 5000 EVO.

The last row shows, successively and alternately, the messages that indicate whether or not the Texas and Philips encrypted transponder copy functions are enabled.

The message "TPX Cloner Found" indicates that the TRS EVO is operational for cloning the Texas Crypto.

Next, the "TPH Cloner Found" message will appear, which indicates that the TRS EVO is also operational for cloning the Philips Crypto.

**TPH CLONER FOUND
TPH VER.: 39.1.6**

Finally, after the message "TPH Cloner found", the firmware version will be displayed that controls the cloning of the Philips Crypto and which can be easily updated using the CL USB port.

4.1.2 INFORMATION SUPPLIED WHEN COPYING A TEXAS CRYPTO

Next, the process will be shown for cloning a Texas Crypto transponder that is mounted for example on a Ford Focus (2007) and the messages shown on the TRS EVO display:

> **INSERT KEY**
> **PRESS READ**

Once the original key is analysed, the following detailed information will be shown:
• JMA code for the chip that holds the key (TP 20).
• Transponder type and manufacturer (Texas Crypto).
• Manufacturer of the vehicle that uses it (FORD).
• The JMA transponder that must be used for cloning this key (TPX2).
• Information about the transponder's internal structure, which will be different depending on the chip manufacturer. As an example, a FORD key would be (Password: 03, Manufacturer's code: 01, Serial number: 00 and User serial number: 2FAC03, bits locked, which refers to the write-protected information pages, 0010 (Pag3 LOCK) and finally if the old DST40 algorithm or the new DST80 is used).

> **TP20 TEXAS CRY FORD**
> **COPY ON TPX2**
> **PW: 03   ID: 00   2FAC03**
> **MC: 01 LCK: 0010 DST40**

After entering the JMA (TPX2) transponder on which the cloning on the antenna will be carried out, press the COPY button.

> **READY TO COPY**
> **PRESS COPY**

LThe TRS EVO will begin to analyse the transponder from the original key

> **PLEASE WAIT**
> ....

Once discovered, this information will be written on the TPX2 and it will beep once if the copy is executed correctly.

> **COPY OK**
> **EXTRACT KEY**

4.1.2 INFORMATION SUPPLIED WHEN COPYING A PHILIPS CRYPTO II.

Next, the process will be shown for cloning a Texas Crypto transponder that is mounted for example on a Ford Focus (2007) and the messages shown on the TRS EVO display:

> **INSERT KEY**
> **PRESS READ**

Once the original key is analysed, the following information will be shown:
• JMA code for the chip that holds the key (TP 12).
• Chip model included (PCF7941).
• Transponder type and manufacturer (PHC – Philips Crypto).
• The JMA transponder that must be used for cloning this key (TPX4).

• Information about the transponder's internal structure, which will be different depending on the chip manufacturer. As an example, a CITROEN key would be (Serial number: B9B66969, if it is write-protected (LOCK) and the type of coding used (Manchester)).

> **TP12-PCF7941 PHC**
> **COPY ON TPX4**
> **ID: B9B66969**
> **MODE LOCK MANCHESTER**

To activate the TPH Cloner mode supported by Philips Crypto, the process commences by pressing the COPY key on the original key.

> **DO NOT REMOVE THE KEY**
> **PRESS COPY**

While the HT2 algorithm used by Philips Crypto second generation is being loaded into the memory, the TRS EVO will display the following message:

> **PLEASE WAIT**
> ....

When the FPGA has loaded the corresponding memory, the following will be shown on the display:

> **TPX CLONER READY**
> ....

And the TRS EVO will be ready for analysing and completing the following steps, requesting a return to read the original key:

> **PRESS [READ]**

Next, the transponder's type and brand will be indicated, as well as whether it is an original transponder or a copy (Philips crypto type):

> **PHILIPS CRPTO**
> **PHILIPS CRYPTO TYPE**

A Virgin TPX4 must then be entered to configure it in capture mode (Sniff) and to be able to capture the data, verifying that the copy has been made correctly.

> **INSERT VIRGIN TPX4**
> **PRESS [COPY]**

> **SUCCESS**
> **GO TO CAR & SNIFF**

The TRS EVO will wait until the data stored in a TPX4 are introduced (these data contain the information flows that are transmitted between the ECU and the original key).

> **INSERT SNIFF TPX4**
> **PRESS [READ]**

This data will be stored in the TRS EVO's RAM memory so that it is available during the search process.

```
DATA SNIFFED TPX4
COPY? CP=YES
```

With successful conclusion in this case, the data preparation process considered in (Step 2) prior to the actual search is:

```
STEP 2 SUCCESS
```

Next, and using the information provided from the sniff, attempt to access the transponder's internal information pages:

```
INSERT ORIGIN KEY
PRESS [COPY]
```

The search process duration is totally variable and depends on from where the data is stored in the 24GB's from available information:

```
PROCESSING
00 %
```

Once access is available to the transponder records map, the data is copied either from the same transponder during the sniff process or from another TPX4, indicating whether or not the copy has been made successfully.

```
KEY FOUND
```

```
RE-INSERT TPX4
COPY?   CP=YES
```

```
SUCCESS
```

The Philips Crypto II family provides the possibility to clone as many transponders as required by pressing COPY once the information in the RAM memory is available in the TRS EVO.

```
MAKE ANOTHER COPY?
COPY?   CP=YES
```

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