

TAXiTRONiC

BG40 SMART TD INSTALLATION MANUAL

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1. CONNECTION POSSIBILITIES

	TAXIMETER	PRINTER	ROOF LIGHTS	CONNECTION METHODS
a	TX52	Inside	TL70B	TL70B
b	TX52	Inside	Other	BG40
c	TX40	IR3x or none	TL70B	TL70B
d	TX40	IR3x or none	Other	BG40
e	TXD30	IR3x or none	TL70B	TL70B
f	TXD30	IR3x or none	Other	BG40
g	Gobox	Inside	Other	BL60
h	External	IR3x or none	Other	BG40

Clarification about external taximeters: The connection is SmartTD – BG40 – IR3X that means the printer can only write from SmartTD and never from the taximeter.

1.1.1. MIGRATION FROM OLDER DEVICES

1. TX40 and TX52

To migrate from a taximeter without data transmission to a TX40 or TX52 just replace the connection cable between the taximeter and the BG40 as shown in the installation drawings.

It is not necessary to do further changes in the software because the BG40 detects the taximeter automatically.

2. TXD30

To migrate from a taximeter without data transmission to a TXD30 you must check if the software version is correct (section 2), see section 5.2 for configuration.

3. Gobox

To migrate from a taximeter without data transmission to a Gobox see section 5.3 for configuration.

2. NEEDED PROGRAM VERSIONS

For a correct functioning of Smart TD, There must be installed in each taximeter at least a minimum version program besides the corresponding tariff.

TX52 → From the V 2.12

TX40 → From the V 2.12

TXD30 → From the V 7.09

Gobox → From the V 2.20

External taximeter → Ask the manufacturer

To convert a taximeter without data transmission into a Taxitronic model -TX40 or TX52 – just change the cable between the BG40 and the taximeter for the appropriated cable which is shown in the wiring plan.

It is not necessary to carry any software changes because the BG40 detects the taximeter automatically.

3. BG40 TECHNICAL CHARACTERISTICS

The BG40 general technical characteristics are:

- Supply voltage
 - Nominal = 12 V
 - Maximum = 30 V
 - Minimum = 8 V
- Maximum consumption = 70 mA
- Maximum consumption with taximeter in off= 6 mA
- Keeping of data while unplugged from the vehicle's battery = 5 years.
- 40 V surges of 10 ms duration.
- Resistance to electrostatic discharge of 6 kV (Contact), 8kV (Air)
- Operating temperature -20 a +70 °C
- Storage temperature keeping the data -40 a +85 °C
- Dimensions (85 x 52 x 24 mm)

4. BG40 ELECTRIC INSTALLATION

The device is supplied closed. It is necessary to open it in order to make the connections.

The connections depend on the taximeter in which you are installing the BG40: TX52, TX40, TXD30 and other taximeters without data transmission.

5. CONFIGURATION OF PERIPHERALS FOR THE SMART TD CONNECTION

5.1. TX52 and TX40

- 5.1.1. Once the charger is connected to the taximeter and after the tariff is transmitted by pushing the “O” key in the taximeter, we press the “K” key of the charger.
- 5.1.2. On the taximeter’s display appears GI (pulse generator). To move forward to the next step we press Δ .
- 5.1.3. On the taximeter’s display appears Mi. To move forward to the next step we press Δ .
- 5.1.4. On the operating display appears Tr (trigger). To move forward to the next step we press Δ .
- 5.1.5. The taximeter shows the Lu a bright sign type, and which is the roof light selected:
 - 0 Parallel roof light
 - 1 Parallel roof light without verification (Saludes LCD)
 - 2 Parallel with serial protocol (Saludes Piraña / Miniled)
 - 3 Specific roof light France (Starplast)
 - TL70 Taxitronic roof light TL70
- 5.1.6. Press ∇ to change the roof light type. To move forward to the next step we press the key Δ .
- 5.1.7. The “Pri” sign will be shown in the taximeter to select the printer type
 - No: No printer
 - Int: Internal printer (TX52C)
 - IR32: External printer (IR30/IR32/IR32S)


Press ∇ to change the printer type. To move forward to the next step we press the Δ key.


- 5.1.8. The taximeter shows Td (data terminal).
 - No: There is no connection to data terminal
 - TL70: Connected with data terminal through the TL70 roof light
 - Bluet: Connected by an internal Bluetooth (future use)
 - BT40: Connected to a BT40 or to a BG40
 - BT40_L: Connected to a BT40 or to a BG40 in the roof light serial port

Press ∇ to change the roof light type. To move forward to the next step we press the Δ Key.

- 5.1.9. On the operating taximeter’s display appears CI (value of the constant K by pulses). To move forward to the next step we press the Δ key.
- 5.1.10. On the operating taximeter’s display appears Co (insertion by hand of the constant K). To move forward to the next step we press the Δ key.
- 5.1.11. On the operating taximeter’s display appears the already inserted value of the constant K.
- 5.1.12. To record the configuration, we press GR. If we do not want to record it, it is enough by disconnecting the charger.

5.2. TXD30

- 5.2.1. Once the charger is connected to the taximeter, we select the charger key where the configuration is kept and we press the  key in the TXD30. We select with the up and down arrows of the TXD30 the “configuration” line and we accept.
- 5.2.2. Select with the up and down arrows the “Selección luminoso” (roof light selection) line and accept.
- 5.2.3. The different types of roof lights will be shown. Select the installed one with the arrows and accept.
 - Saludes type
 - Other types
 - Saludes serial type
 - TL70 type: Select if the communication with SmartTD is done through the TL70.

If you want to establish the communication with SmartTD through the BG40, even if the roof light is a TL70, you must select “Tipo Saludes serie” (Saludes serial type).
- 5.2.4. Exit the configuration's menu with the key  and search with the arrows the “Inicio” (“start”) line and accept.
- 5.2.5. Look with the arrows for the “taximeter” line and accept.
- 5.2.6. Once in taximeter mode, connect the charger, select the correspondent key and the tariff and charge.

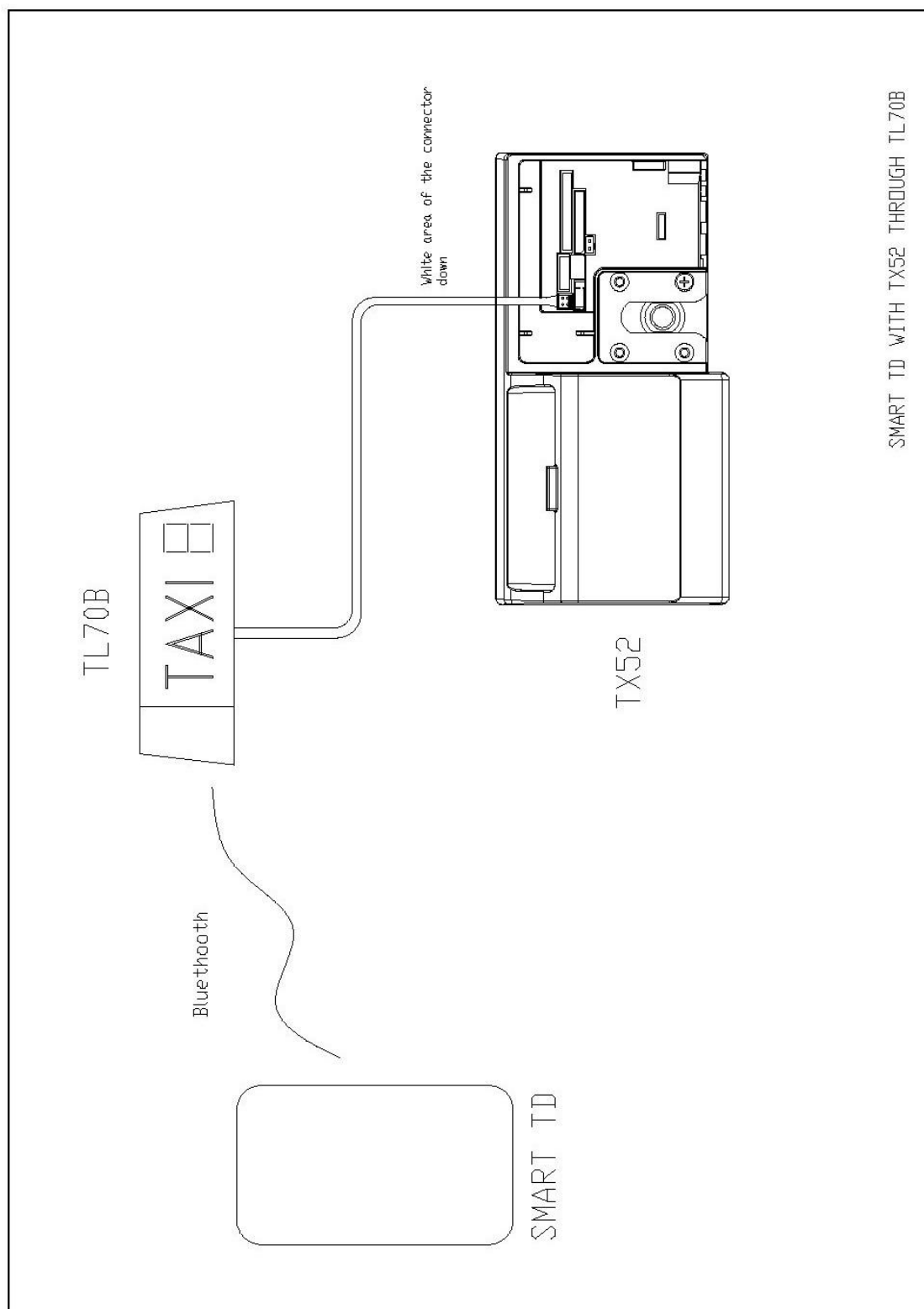
5.3. GOBOX

- 5.3.1. Enter the configuration's menu.
- 5.3.2. Get to the “Installation” screen.
- 5.3.3. Select the “Smart TD” box.

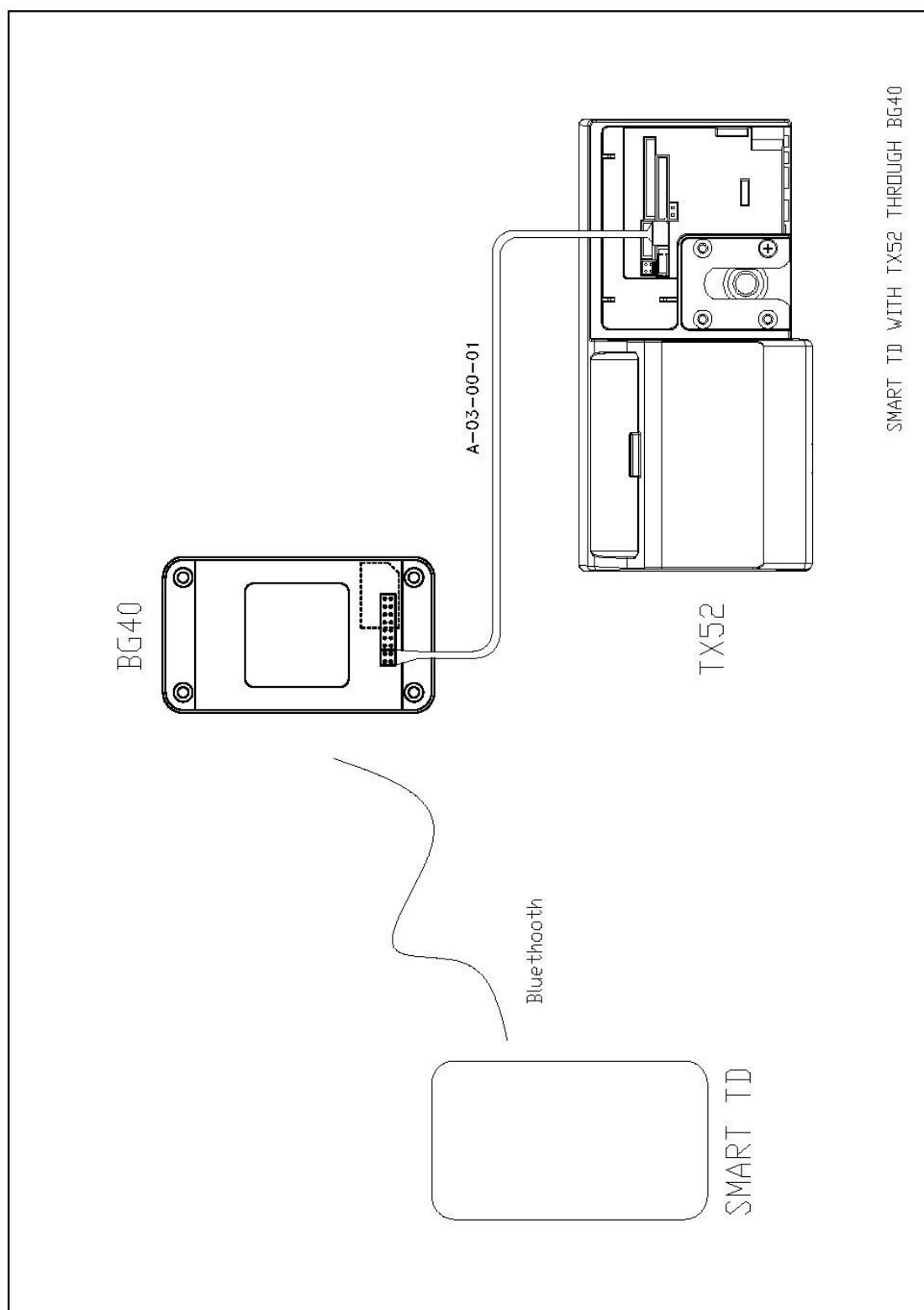
5.4. EXTERNAL

It is not necessary to configure the external taximeter; we simply need to establish the connections as it's said in the wiring plan.

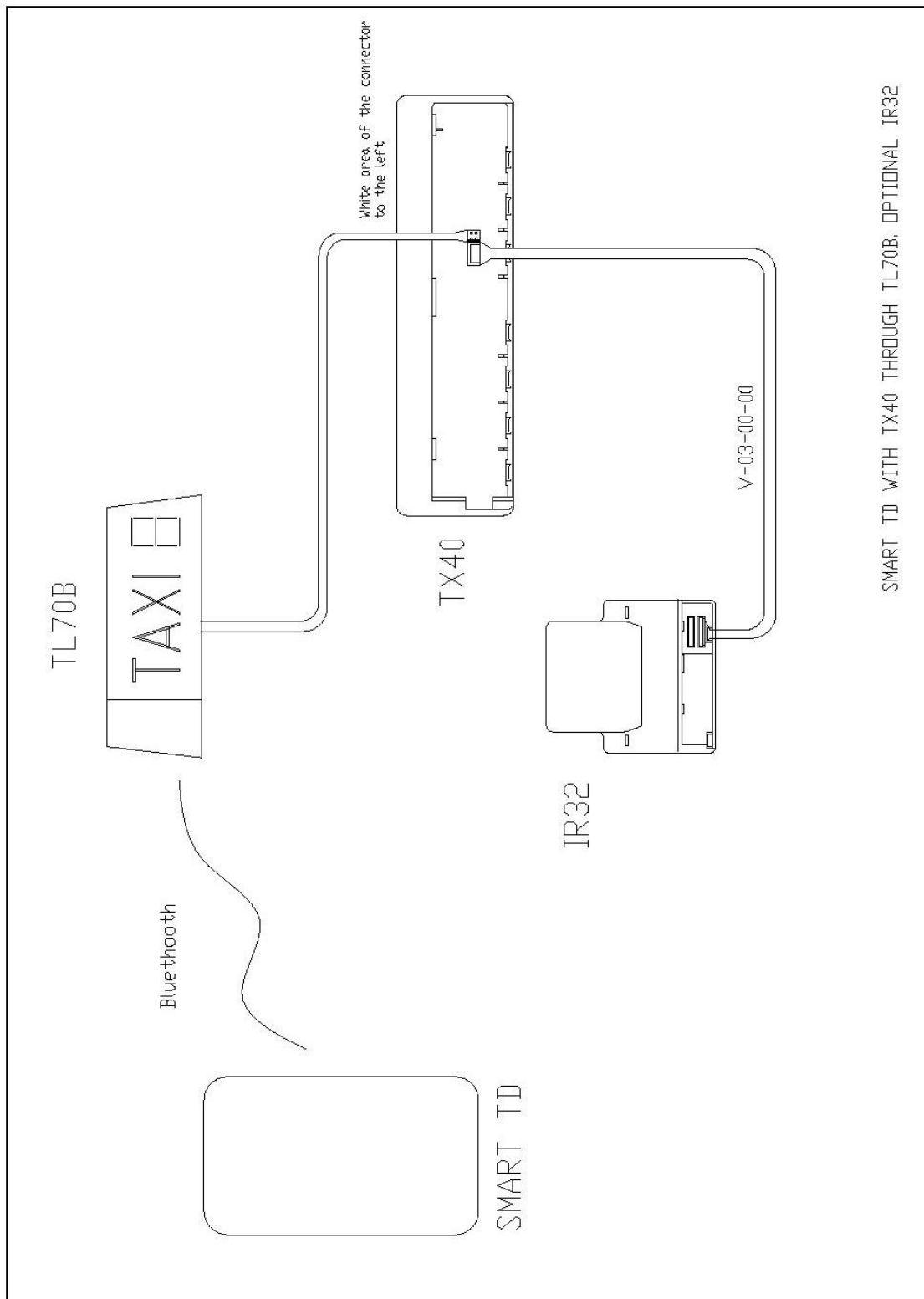
6. WIRING PLANS



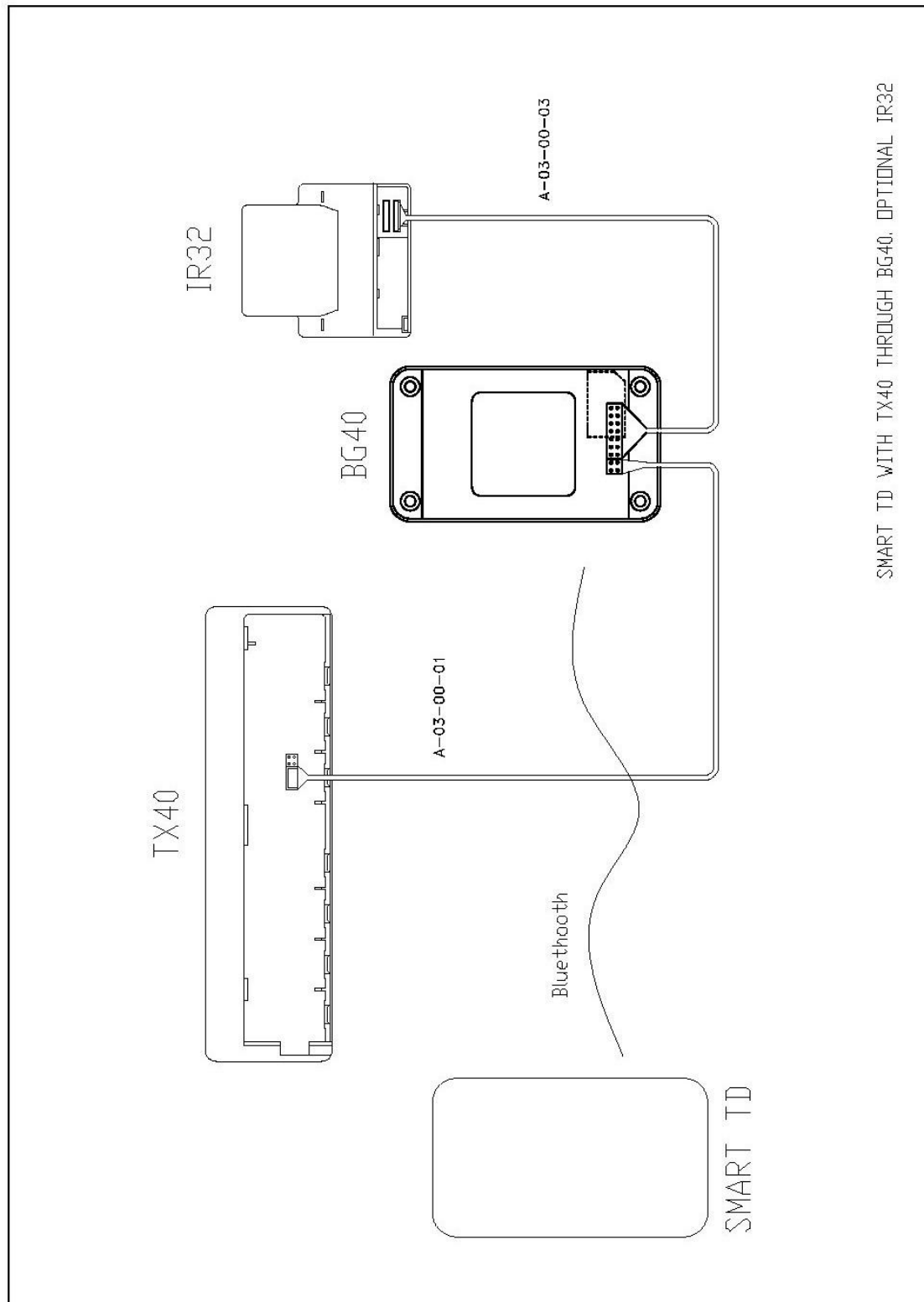
SmartTD with TX52 through TL70B



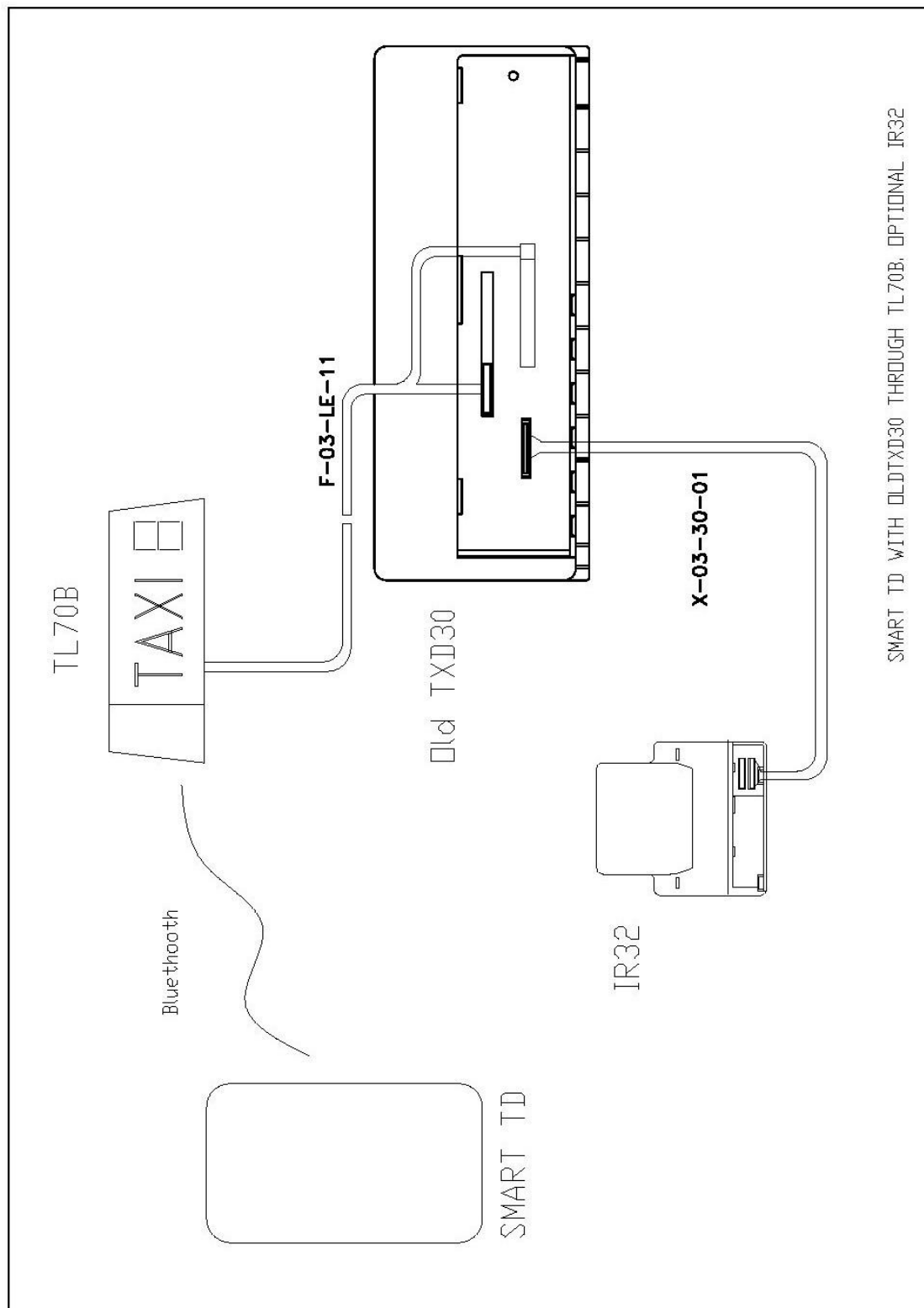
SmartTD with TX52 through BG40



SmartTD with TX40 through TL70B, printer IR32 optional

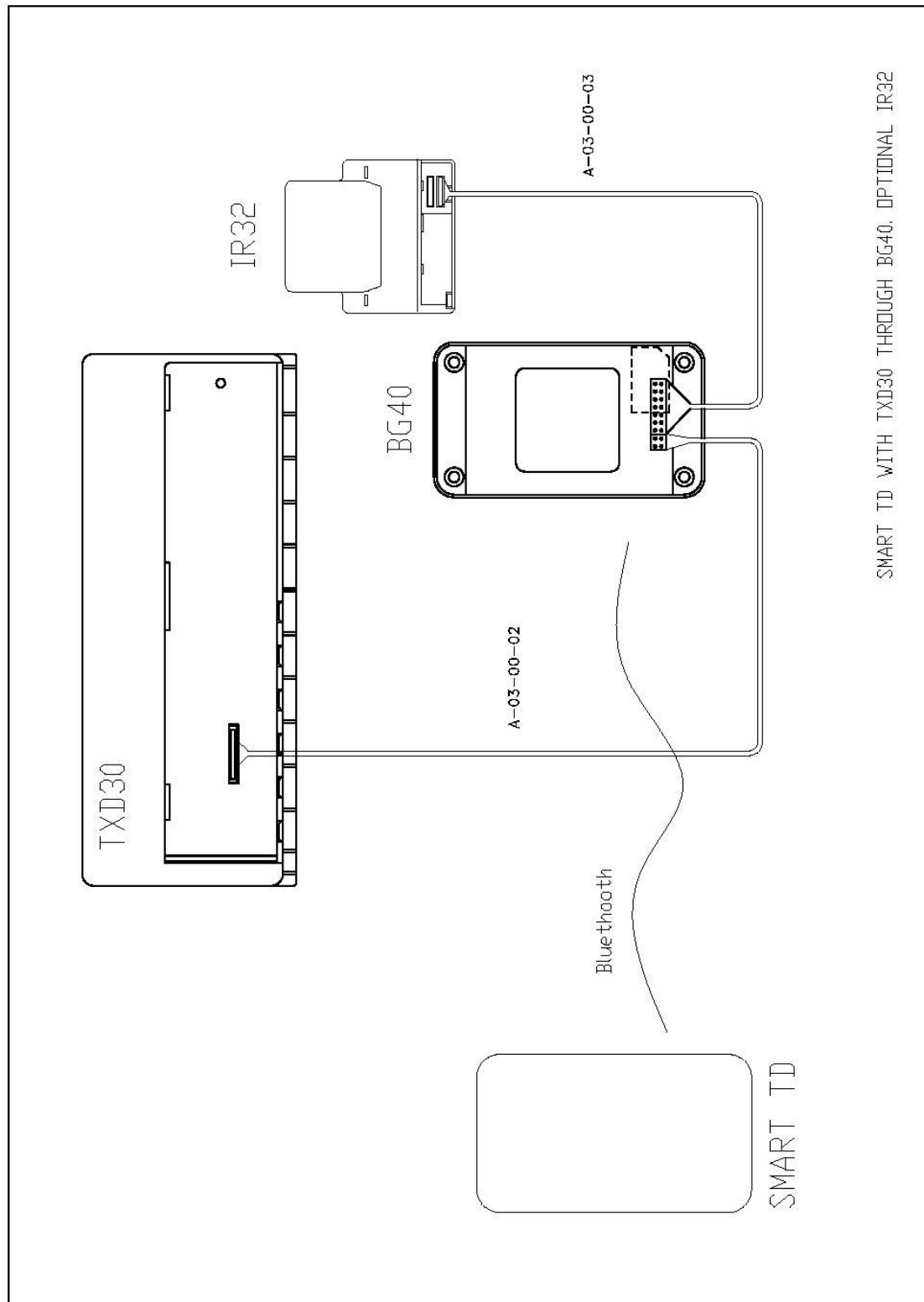


SmartTD with TX40 through BG40, printer IR32 optional

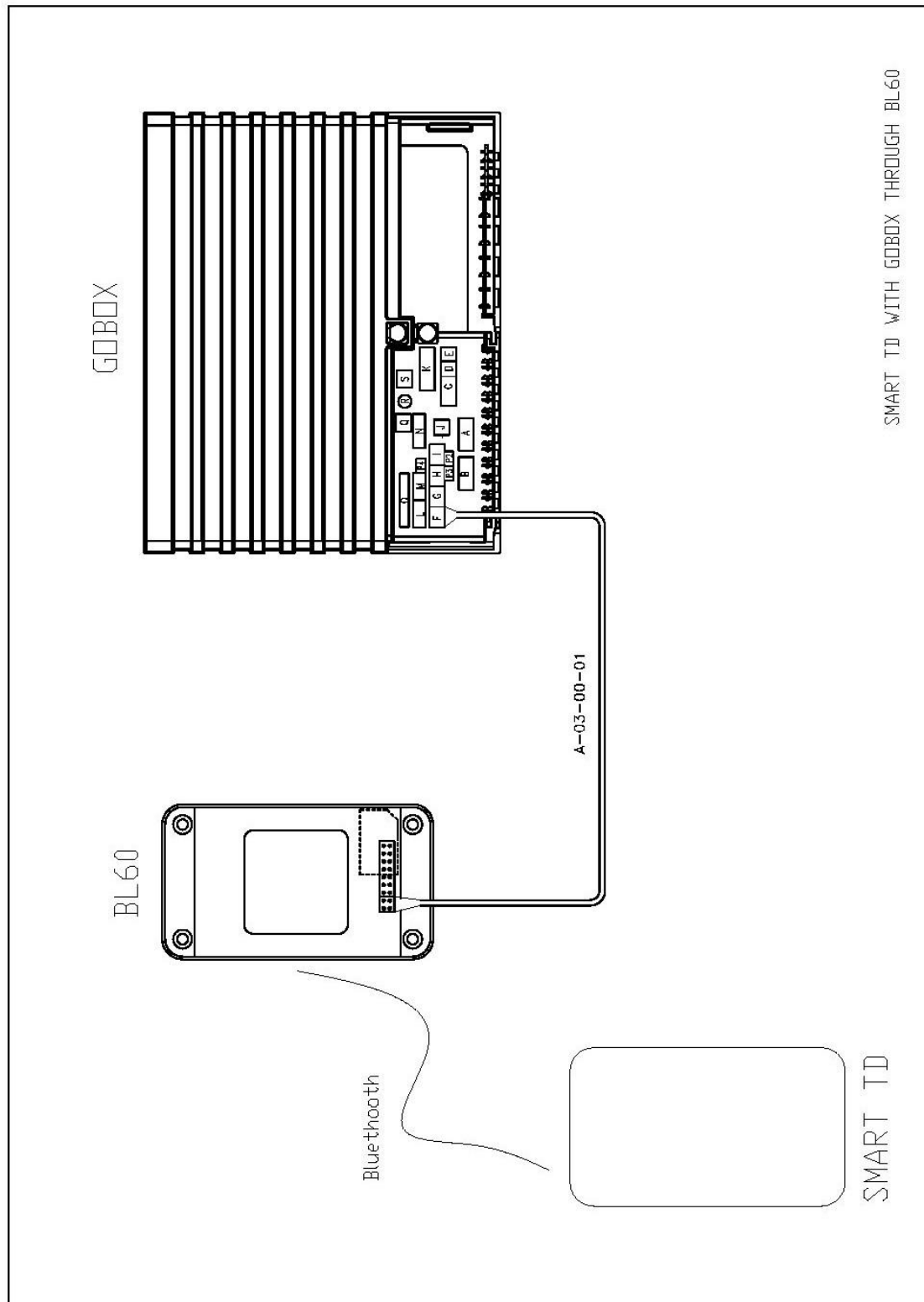


SMART TD WITH OLD TXD30 THROUGH TL70B, OPTIONAL IR32

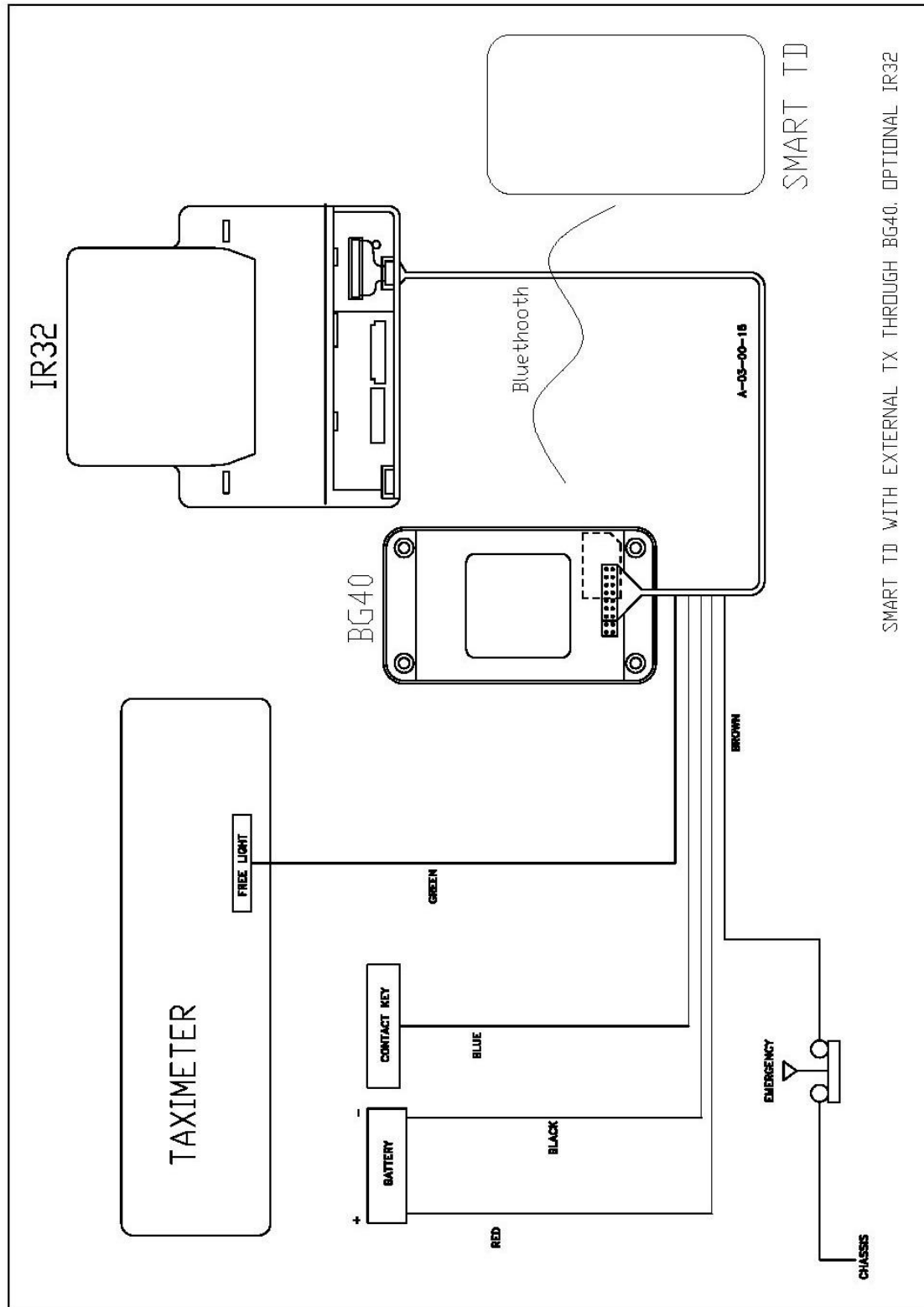
SmartTD with old TXD30 through TL70B, printer IR32 optional



SmartTD with TXD30 through BG40, printer IR32 optional



SmartTD with Gobox through the BL60.



SmartTD with external taximeter through the BG40, printer IR32 optional

7. MECHANICAL INSTALLATION

7.1. Installation through the BG40

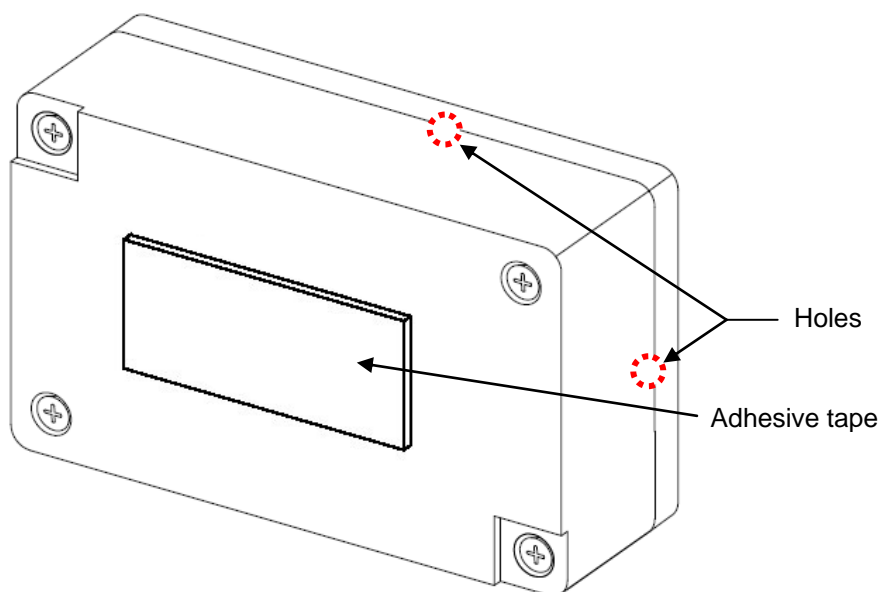
The device will arrive sealed. It is necessary to open it to proceed to the connection. The BG40 installation inside the vehicle is very easy. The BG40 must be stacked to the front window.

To close the box after the connection it's necessary to break the housing with the adhesive tape to facilitate the wiring exit.

Once we find the correct position, we open the BG40, we break the low windows, we pass the wires through them and close the device, with the GPS always face up and the adhesive tape face up (in order to stick it to the window). This is the recommended place.

We screw the device by placing back the two screws that have been removed and the other two included in the box.

After that we just need to remove the protection film from the adhesive tape and fix the device to the front window. To get a good adhesion, we should clean previously the surface with alcohol press strongly the BG40 once installed against the surface for about 1 minute and do not move it



BG40 installation to stack it to the front window.

In the cases that the material of the window will not allow to pass the waves, the BG40 will be stick to the front window behind the rear-view mirror. This area is normally prepared for the communication devices and usually come marked with dots.

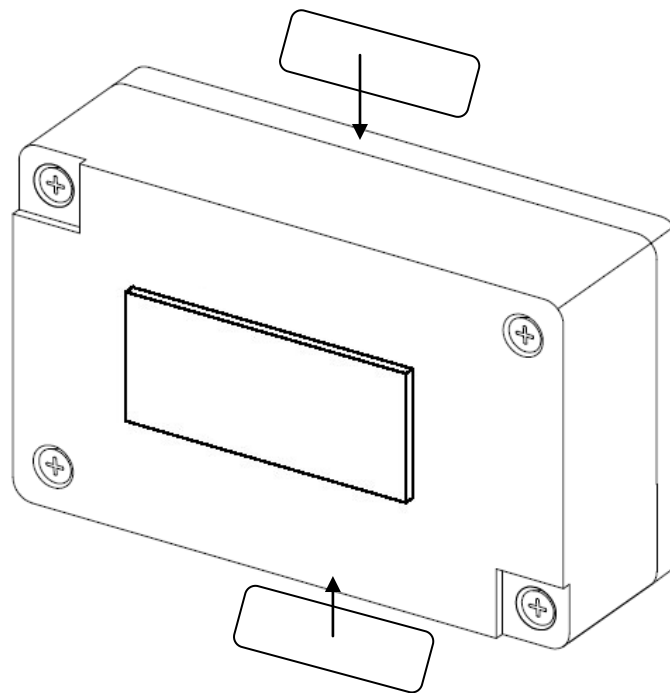
The attaching process is the same one described above. The orientation must be with the two screws backwards and the adhesive tape face up. We will leave a space to allow the rear-view window to move freely.

This installation requires long connection wirings. The references for your purchase are:

Desired Connection	Reference
BG40 – TX40/TX52	A-03-00-11
BG40 – TXD30	A-03-00-12
BG40 – IR32	A-03-00-13
BL60 – Gobox	A-03-00-11
BG40 Taximeter without data connection	None

7.2. Installation through the BG40i

The installation through the BG40i is the same as the installation through the BG40, with the addition of two installer sealing stickers covering the junctions on the two wider faces in order to show if the device has been unsealed.

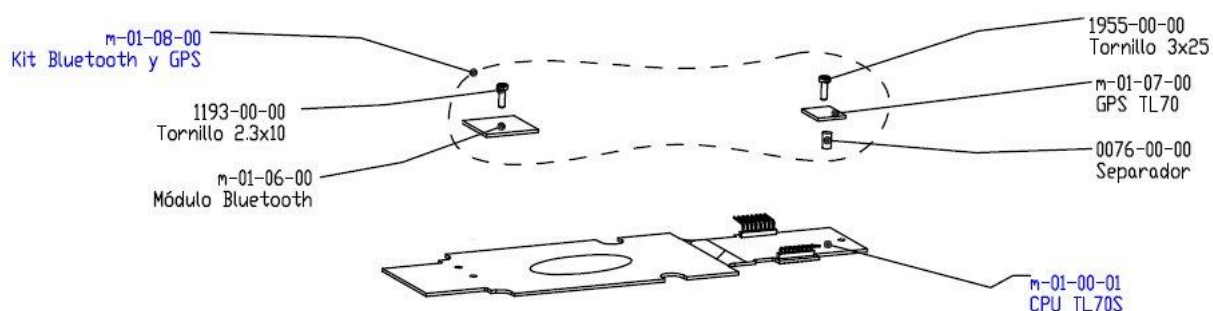


7.3. Installation through TL70B

The TL70B installation is described in the manual of the device. Depending on the type of base the installation should be done in one way or another.

We can convert a TL70 in a TL70B through the Bluetooth and GPS kit M-01-08-00.

We need to open the TL70.



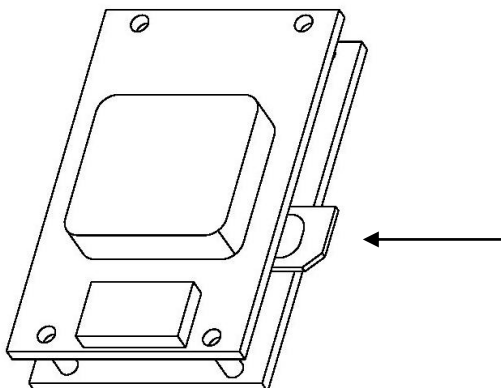
For the Bluetooth connection (M-01-06-00), just connect it to the CPU (M-01-00-01) and screw it with the screw (tornillo) (1193-00-00).

The GPS connection (M-01-07-00) is similar but with a separator (0076-00-00) that divides the GPS from the CPU. All will be fixed with a screw (1955-00-00).

Once everything is connected, you can close the device and sealed.

8. BG4 GERMAN FISCAL SYSTEM (INSIKA) CONFIGURATION

8.1. Installing the INSIKA card in the top slot, as shown in the diagram..



8.2. Entering the PIN:

Start the setup software BG40 in the smartphone.

Select "Search Devices".

Select the BG40 we are setting (at the end of the line appears the linking password).

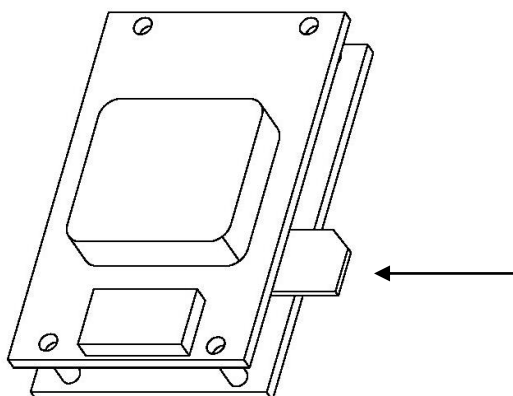
Enter the password when the program asks for it.

When the BG40 read the SAM card, it will ask for the PIN number on the display.

Enter it.

9. BG40 GSM CONFIGURATION

9.1. Installing the SIM card in the bottom slot, as shown in the diagram.



9.2. Entering the PIN:

Start the setup software BG40 in the smartphone.

Select "Search Devices".

Select the BG40 we are setting (at the end of the line appears the linking password).

Enter the password when the program asks for it.

When the BG40 read the SAM card, it will ask for the PIN number on the display.

Enter it (there is only three attempts before the SIM is locked).

If the SIM is blocked you have to introduce it in a phone and enter the PUK number.

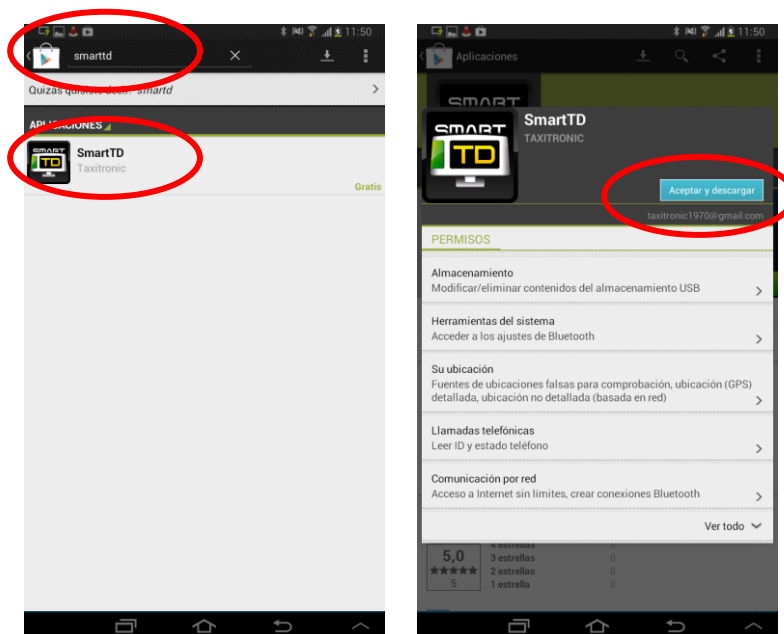
10. SMART TD CONFIGURATION TO THE CONNECTION WITH THE TAXIMETER



PREVIOUS REQUIREMENTS

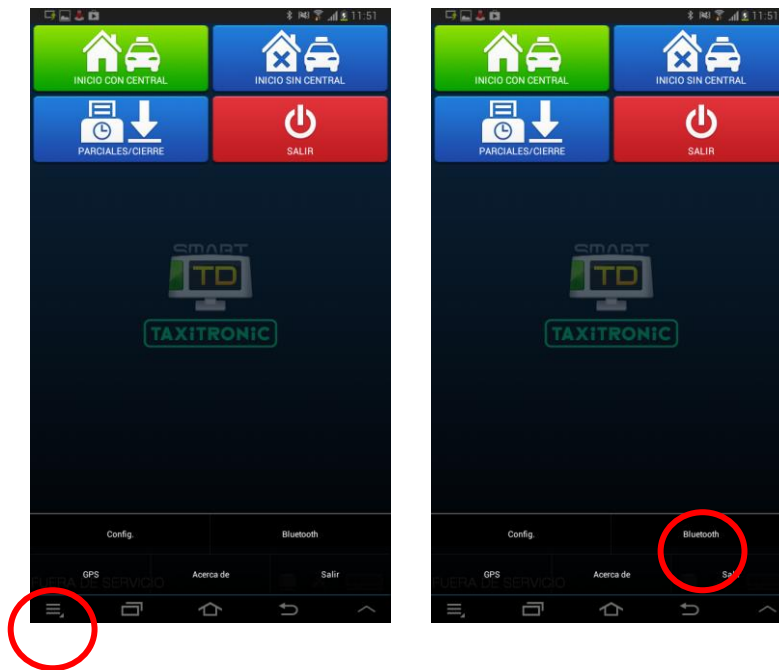
- The user should acquire an Android device:
 - o Approved by Taxitronic for its correct link via Bluetooth. In the launch the approved devices are: Samsung Galaxy SII (GT-I9100), Samsung Galaxy SIII mini (GT-I8190), Samsung Galaxy SIII (GT-I9300), Samsung Galaxy Note II (GT-N7100), Samsung Tab 2 7.0 (GT-P3100)
 - o With an operative system version 4.0.x o 4.1.x
 - o With a SIM of standard data with access to the internet of any mobile operator. The user must know the PIN or PUK code to unblock it. And with the battery charged
 - o With the downloaded application of Google Play Store properly configured.
- The user should have a user name and a password given by its Radio taxi.

OPERATION

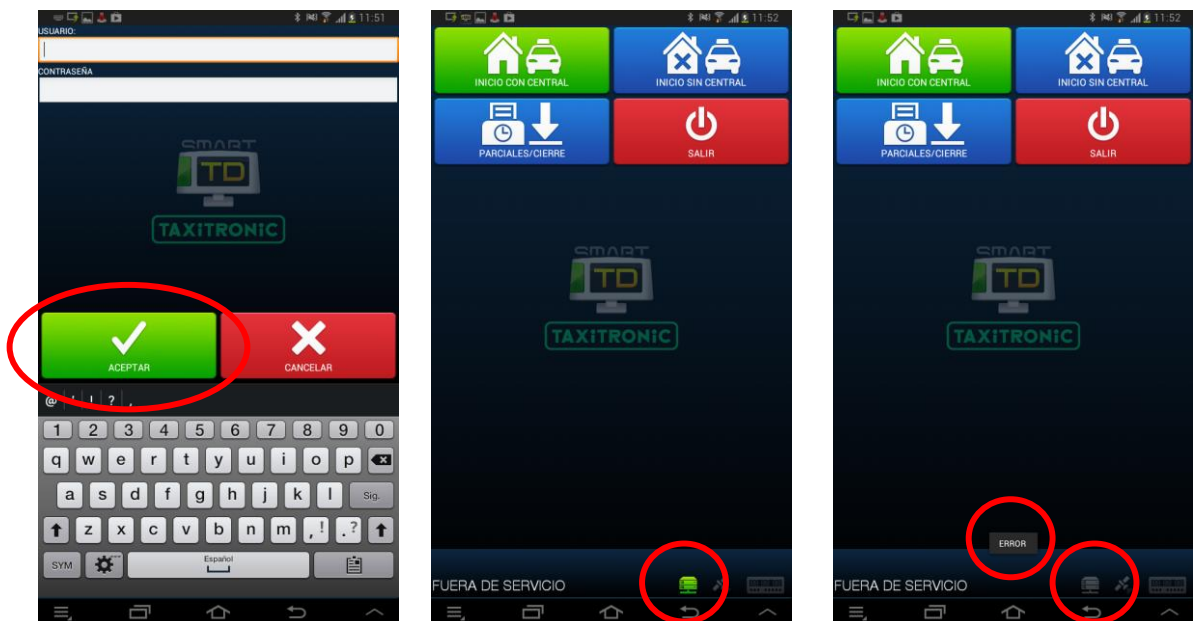
1. **Download** the **Smart TD** application from Google **Play Store** in the Android device (you can find it looking for the “smarttd” word)



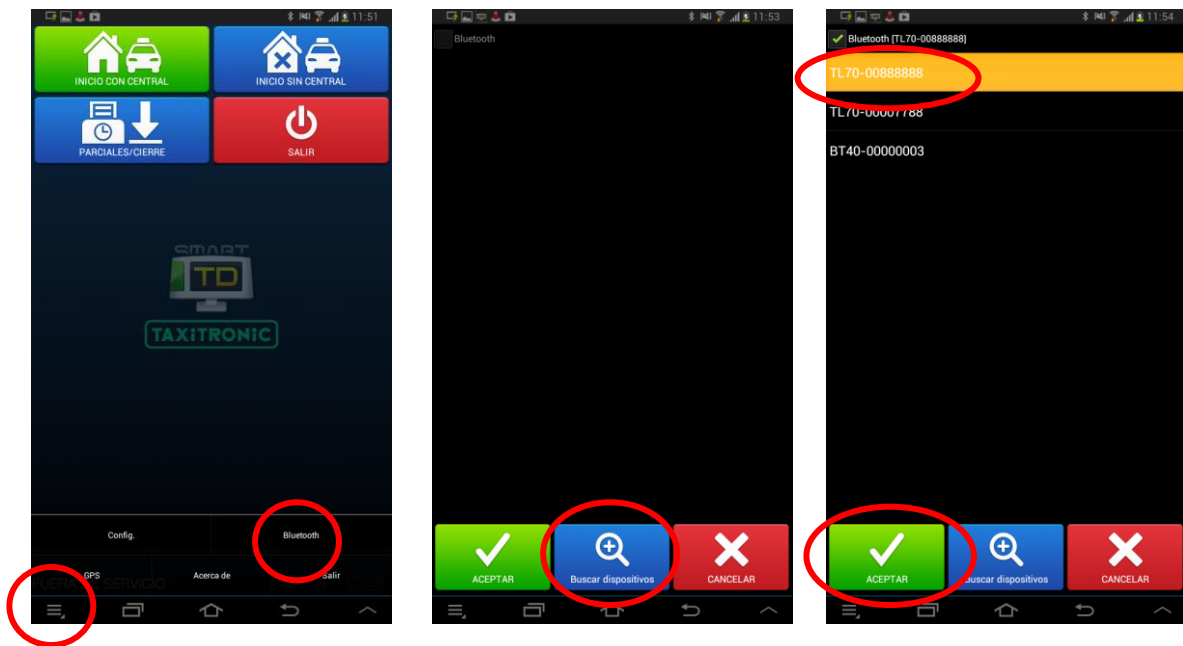
2. We enter in the Smart TD **options menu** (depending on the Android device we should use the button  or ) and we select the **Bluetooth option**.



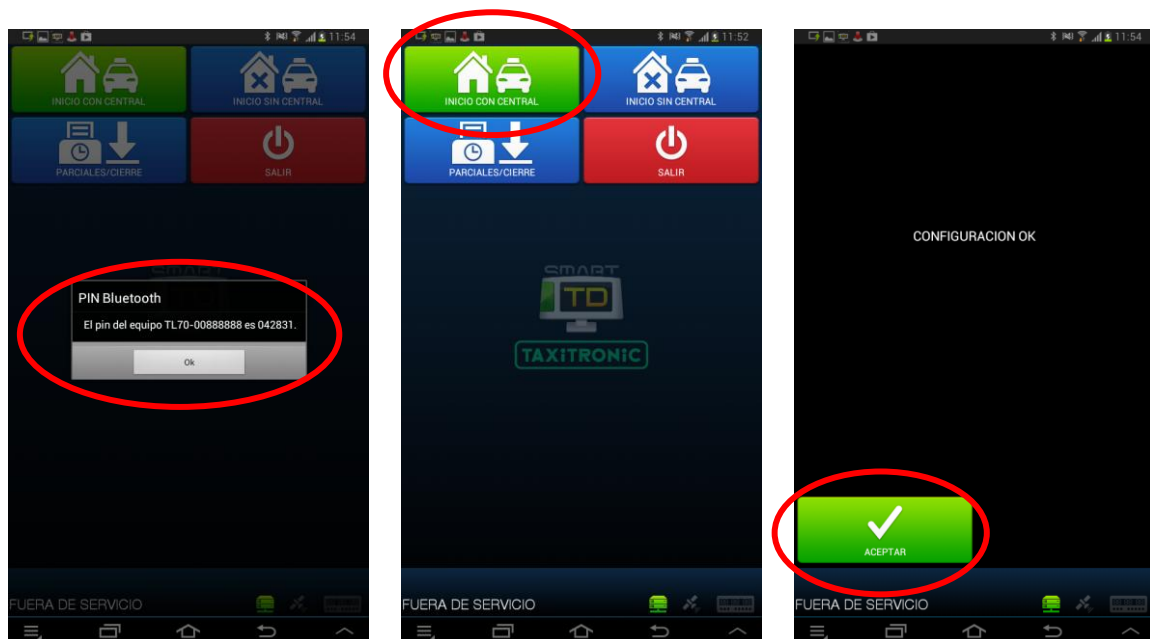
3. The first time we enter the Bluetooth menu, **the application will request the user's name and the password given by the Radio taxi**. Once we enter this data, press the "Accept" icon. The application will establish contact with the central (it must have data coverage) to get the validation. If the user's name and password are correct, after a few seconds, the central connection indicator will light green. If the data entered is wrong, a message error will be display and the indicator will not highlight.



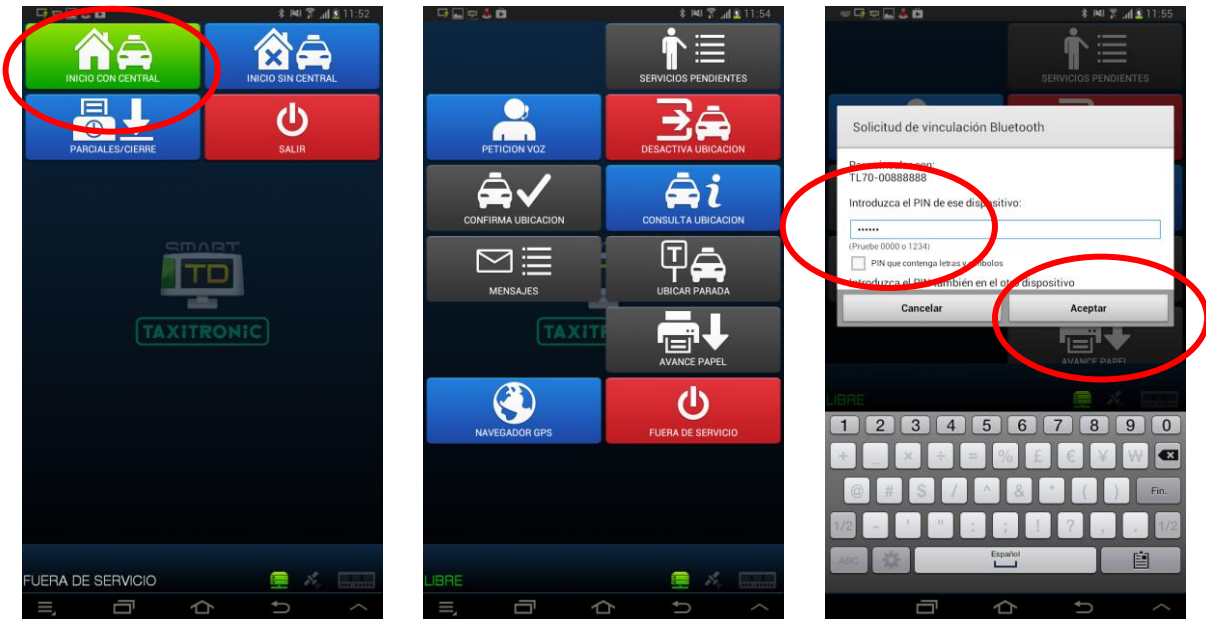
4. **We will get to the new Bluetooth menu**. The application will show the management Bluetooth device screen. Pressing the icon "**Searching for devices**" the application will show the nearest available devices, indicating the model (BG40 or TL70) together with its serial number. **We press on the desired device** to select it (we will see that in the upper part, next to the Bluetooth word it will appear the selected device) and after that we will press the "acceptance" icon. The assignation of a device means the release of any device assigned previously to the user.



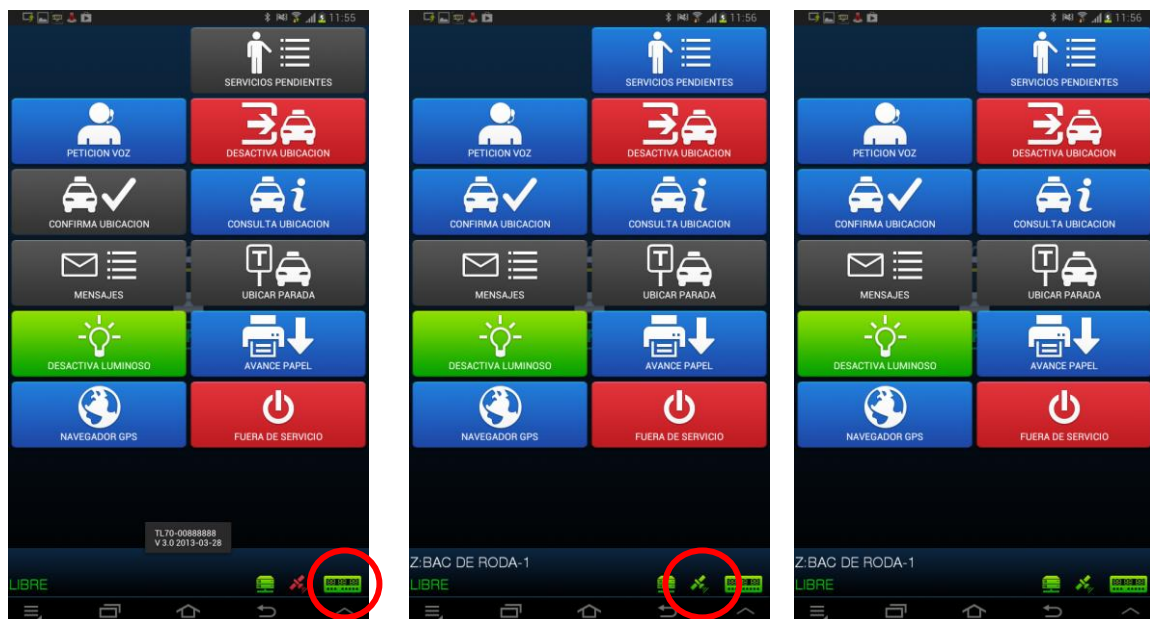
5. The application will manage with the server the assignment and it will show on the screen the necessary **Bluetooth PIN** to complete the link with the next step. We write it down and press "OK". Afterwards we press the icon "**Inicio con central**" ("start with central"). **The first time we should receive the message "Configuración OK". ("Configuration OK").** We press the "aceptar" ("acceptance") icon.



6. **We try for a second time "Inicio con central"** ("start with central"). After few seconds a window should appear, we type the **Bluetooth PIN** we got in the 5th step.

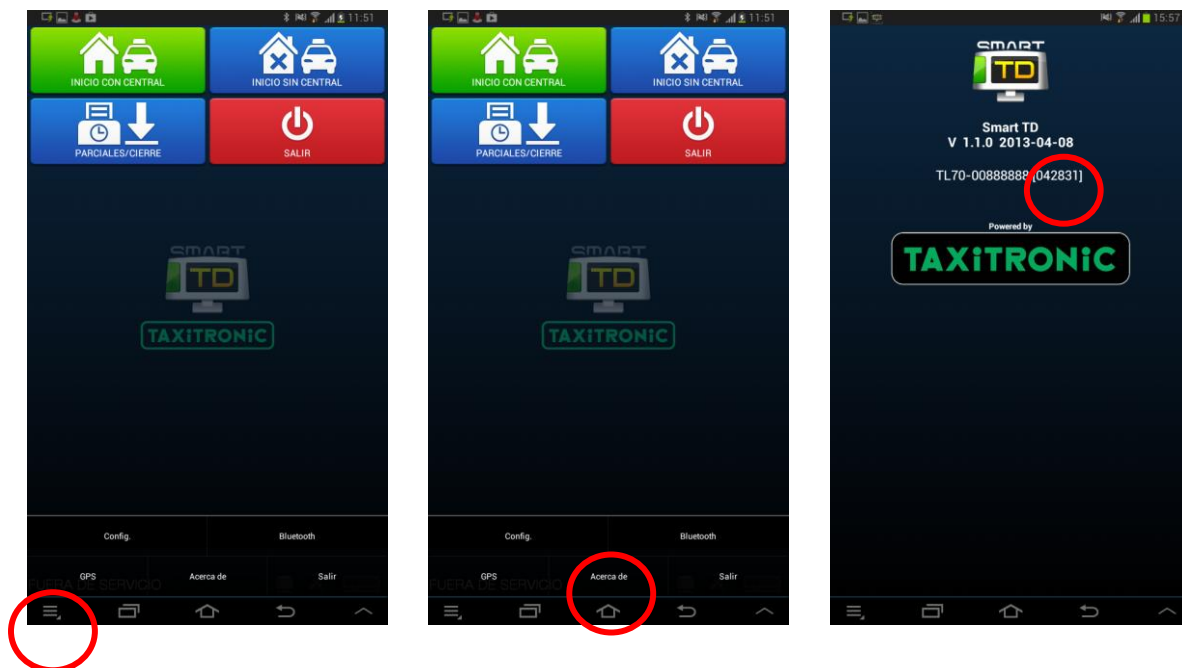


7. After few seconds, the **Bluetooth communications indicator with the taximeter should light green**. A few seconds after, the **GPS indicator will light green** that will mean that the Smart TD application is locating in central and ready to work.

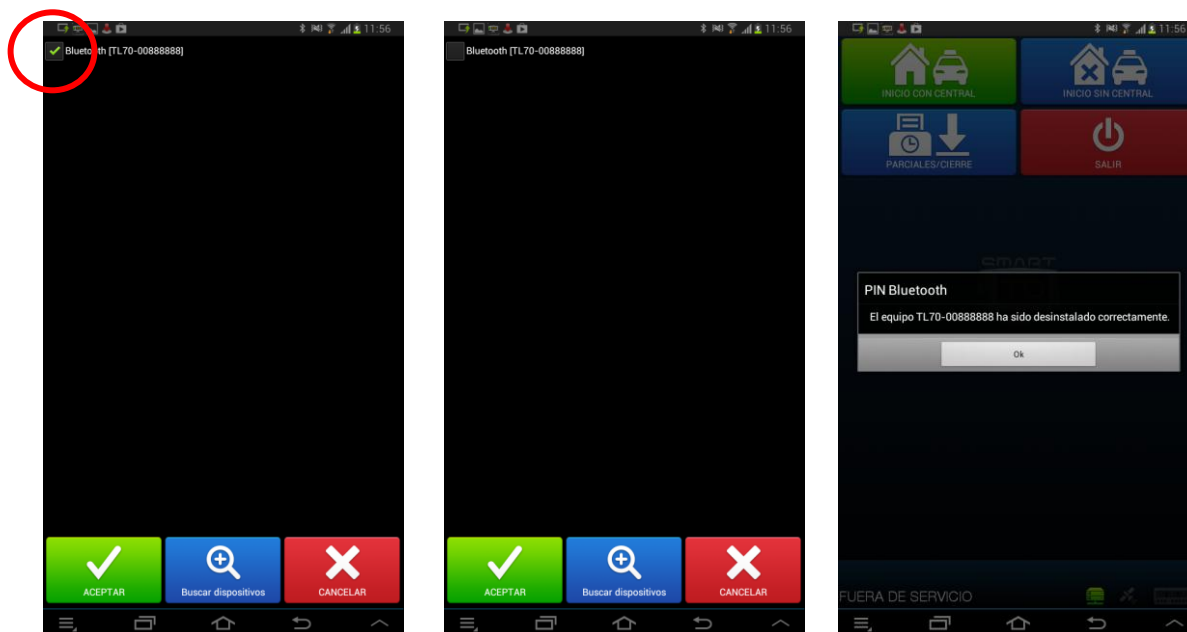


Remarks:

- a) You can check the Bluetooth PIN in any moment from the option “Acerca de” (“regarding”) of the options menu. This possibility is useful to accelerate the substitution of an Android device of a previously registered user.



- b) There is the option of releasing the device deallocating it from this very same screen. Just enter in the Bluetooth menu and deactivate the check box Bluetooth at the upper part of the screen. This is useful for an installer that has several Bluetooth devices nearby and has assigned one of them to the wrong user.



11. PANIC BUTTON CONNECTION

You can use a panic button connected to the taximeter to send emergency positions to the Radio taxi. It should be the closed at rest type and it can be the same that it was being used with the TC50. It connects to the taximeter's supply wiring, between the brown wire and mass.

In case of an already existing installation of TXD30 + TC50 with panic button closed at rest, it is possible to keep the same installation of the already existing panic button. If the wiring does not have the brown wire, it can be added in the contact 10.

	Color of the supply wiring	Pin number
TX52	Brown	10
TX40	Brown	10
TC50	Yellow	8
TXD30	Brown	10
Gobox	Brown	6

At this moment is kept, the TXD30 + TC50 installation keeping the panic button from the TC50 as well as the panic button installation connected to the TD30.

The configuration that shows if the button is on the TXD30 or the TC50 will come from the radio taxi central.

To verify the correct functioning of the panic button:

Open the shift to force SmartTD and connect it to the taximeter. Pass to "out of service" and get access to GPS menu. It will be shown icons of the contact key and the emergency triangle.

In this state, you can press the panic button without the central receiving the emergency. That allows testing the correct functioning of the button.



The meaning of each color:

	State of the contact key	State of the panic button
Green	Activated	Pressed
Red	Not activated	Not pressed
Grey	Not detected	Not detected

12. CLARIYING NOTES

- a) With the Smart TD connection, the TXD30 no longer have the payment card function with magnetic stripe reader integrated, this function is carry out through the PIN-PAD Bluetooth connected to SmartTD.
- b) The Smart TD application is not compatible with the use of the PRIMA program.
- c) If the TXD30 was previously connected to a TC50-TC60, it is possible to keep the same installation and use the TC50-TC60 as emergency and hands free device.
- d) The wiring will be separately supplied (F-03-LE-11 y F-03-LE-12).