

DT202 Operating Instructions Revision 1 24-07-2023

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DT202 Operating Guide

DT202 Alarm Overview

The DT202 is a Thatcham Category 2-1 accredited alarm system.

It has been designed specifically for aftermarket installations onto all 12-volt motorcycles that have a Thatcham accredited category 2 immobiliser whether O.E or aftermarket.

When armed the DT202 protects the motorcycle the alarm monitors the motorcycle for signs of unauthorised movement by use of a movement sensor, unauthorised ignition operation and unauthorised access to the alarm control unit as well as battery disconnection. If any of these conditions are detected the alarm siren will sound and the motorcycle indicators will flash except if the motorcycle battery has been disconnected, where the siren will still sound using an internal rechargeable battery in the DT202, but the motorcycle indicators will not flash. The siren will operate for 29 seconds, then re-arm. This will be repeated 10 times if the alarm trigger remains. After the activation cycle has been repeated 10 times the siren will no longer sound on that circuit until the next alarm arm/disarm, all other circuits remain active though.

The information contained in this publication is accurate at the time of final approval, however, Datatool reserves the right to amend the information at any time without notice.

Insurance Approval

The DT202 is approved in the UK as a Thatcham Category 2-1 alarm/immobiliser, designed to be installed on all 12-volt motorcycles that have a Thatcham accredited alarm or immobiliser whether O.E or aftermarket.

When installed to the correct specification motorcycle, the DT202 will have the Thatcham Category 1 status.

Thatcham Evaluation Numbers

Model	Description	Thatcham Category	Thatcham Approval
DT202	Alarm (All motorcycles installed with a category 2 immobiliser)	Cat 2-1	TSC482

UNECE Regulation No.10 Approval

Model	Description	VCA Approval No.
DT202	Alarm/Immobiliser (All motorcycles)	E11*10R06/01*10835*01

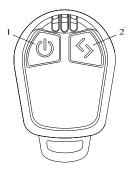


The Remote Control

The DT202 is provided with 2 remote controls as standard. It is possible to add up to 4 extra remote controls (6 in total). We recommend making use of both remote controls from time to time, ideally alternating use every 3 to 6 months.

The left hand 'Arm/Disarm' button controls the main arm/disarm functions of the system. The right hand 'Programming' button is used to initiate secondary functions such as movement sensor deactivation (Transport Mode) and bike finder.

When either button is pressed on the remote control, the LED indicator will illuminate to confirm the button has been pressed and the remote transmitter is operating. If the LED indicator does not illuminate when either button is pressed replace the battery as detailed on the following page.



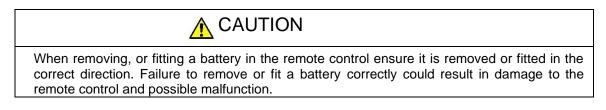
- 1. Arm/Disarm button
- 2. Programming button

Replacing the Battery

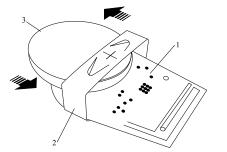
Each remote control contains a single long-life lithium battery (CR2450). Please replace the remote battery when the range of operation decreases noticeably.

NOTE: Ensure the used battery is disposed of or recycled in accordance with local environmental regulations. Incorrect disposal or recycling of a battery may result in prosecution.

1. To replace the battery, locate the recess in the edge of the remote control casing and gently prise the upper and lower sections of the casing apart at this point.



2. The battery is retained by a clip on the remote control circuit board and can be removed by sliding the battery out from under the clip in the direction shown. Fit the new battery, ensuring the battery polarity is correct, by sliding the battery under the retaining clip in the direction shown.



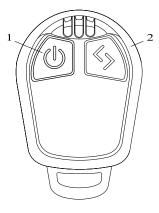
- 1. Remote control circuit board
- 2. Retaining clip
- 3. Battery



3. Align the two casing halves and squeeze firmly to click the casing back together, ensuring the joint is even around the perimeter.

Operating the DT202 Basic Functions

Arming (turning the DT202 on) and disarming (turning the DT202 off) are the most common interactions and can be performed with a single button operation on the remote control.



- 1. Arm/Disarm button
- 2. Programming button

Arming the DT202

To manually arm the DT202 with the motorcycle ignition switched off press the Arm/ Disarm button on the remote control once. The indicators will flash twice and if arm/disarm tones are enabled, a double chirp will be heard.

The dedicated alarm LED in the motorcycle instruments will illuminate for 3 seconds and then flash once every second for a further 10 seconds whilst the system initializes the tilt sensor and trigger inputs. After 10 seconds, the DT202 is fully armed, and the motorcycle LED will flash at a rate determined by the motorcycle battery voltage (see Battery Monitoring).

Disarming the Alarm

To disarm the DT202 press the Arm/ Disarm button once. The indicators on your motorcycle will flash once to confirm the DT202 has disarmed and if the audible chirps are enabled, a single chirp will be heard, if the alarm system has triggered during the armed state then the siren will sound a chirp followed by a diagnostics sequence (see Diagnostics). The motorcycle ignition can now be turned on without triggering the DT202 The DT202 cannot be re-armed within 3 seconds of disarming. On disarming of the alarm system, if Automatic Rearming is enabled the alarm LED will remain solid to indicate the this will occur.

Passive Arming

With Passive Arming enabled there is no need to press the Arm/Disarm button to arm the DT202. Once the motorcycle ignition is switched off the DT202 the alarm LED will illuminate solid to indicate Passive Arming is enabled and the alarm system will fully arm after the chosen delay period, which can be chosen by the user from 30 seconds or 1 minute. The indicators will flash twice and if arm/disarm tones are enabled, a double chirp will be heard automatically arming.

If the Alarm Protection Switch is activated and remains activated once the alarm system arms the directional indicators and the siren will sound at full volume.

Passive Arming is disabled by default.



Operating the DT202 Advanced Features

In addition to the basic functions the DT202 also offers the following advanced features:

- Arm silently
- Disarm silently
- Arm in Transport Mode
- Long Term Storage Mode
- Bike Finder
- Panic Alarm
- Battery Monitoring

Arm Silently

If the arm/disarm tones are enabled, it is possible to arm the DT202 silently by pressing the Programming Button on the remote immediately before pressing the Arm/Disarm button.

The buttons must be pressed within 3 seconds of each other, the DT202 will arm as normal except the arming notification tones will not be sounded. Subsequent arming sequences will not be affected.

Disarm Silently

If the arm/disarm tones are enabled, it is possible to disarm the DT202 silently by pressing the Programming Button on the remote immediately before pressing the Arm/Disarm button.

The buttons must be pressed within 3 seconds of each other, the DT202 will disarm as normal except the disarming notification tones will not be sounded. Subsequent disarming sequences will not be affected. On disarming of the alarm system, if Automatic Rearming is enabled the alarm LED will remain solid to indicate the this will occur.

Automatic Rearming

When enabled, the Automatic Rearming feature will arm the DT202 if the DT202 has been disarmed via the two-button remote and the ignition is not switched on within 30 seconds. On disarming of the alarm system, the alarm LED will remain solid to indicate the alarm system Automatic Rearm will occur.

Turning on the ignition or arming via the two - button remote will cancel the Automatic Rearming feature. Automatic Rearming is disabled by default.

To ensure the machine remains covered at the level chosen if it is accidentally disarmed, when the system is disarmed it automatically starts a 30 second countdown after which the system will auto re-arm at the SAME level it was last armed; be it fully armed, armed in Transport Mode or immobiliser only.

NOTE: The DT202 will not automatically arm as a result of the ignition being switched off, unless Passive Arming is enabled. However Passive Immobilisation will occur after 30 seconds.

Arm in Transport Mode

To arm the DT202 in Transport Mode, first press the Arm/Disarm button as normal to arm the DT202. Then, within 3 seconds of the first button press, press the Programming button which will disable the movement sensor; the DT202 will chirp a third time (if tones are enabled) and the indicators will also flash a third time to indicate the movement sensor has been disabled.

The motorcycle instrument LED will now double flash instead of single flash to identify Transport Mode has been activated.



Transport Mode allows the bike to be moved around (for example when cleaning) or transported in a van without the DT202 triggering due to movement.

NOTE: Ignition detection and ECU protection switch detection remain fully active.

To exit Transport Mode simply disarm the DT202 using the Arm/Disarm button and rearm the DT202 if required.

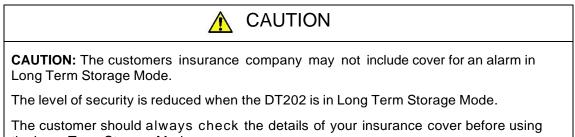
Long Term Storage Mode

Long Term Storage Mode, also known as 'Winter Mode' is used for motorcycles that are not ridden for long periods and which are stored securely. When in this mode the DT202 draws negligible current and will only respond to the ignition being switched on, the movement sensing and ECU protection switch detection are inoperative.

To enter Long Term Storage Mode, disarm the DT202 and with ignition off hold down both buttons on the two-button remote for 10 seconds. A loud bleep will be heard, and the DT202 system will now be inactive.

To exit Long Term Storage Mode, turn the motorcycle ignition on the motorcycle indicators will start to flash and the DT202 will sound a series of fast bleeps that rise in volume. Press the Arm/Disarm button to disarm the DT202. If the Arm/Disarm button is not pressed the DT202 will trigger fully and the siren will sound.

NOTE: Long Term Storage Mode should also be used to prevent the DT202 from triggering if the motorcycle battery needs to be disconnected for any reason.



the Long Term Storage Mode.



CAUTION: Prolonged storage of the motorcycle with the DT202 armed will result in battery drain.

Excessive battery drain will cause permanent damage to the battery.

The motorcycle should be connected to an appropriate battery conditioner to maintain good battery condition.



Bike Finder

The Bike Finder feature flashes the directional indicators so that the rider can identify the location of their motorcycle from afar without disarming the DT202.

Bike Finder is only operational when the DT202 is fully armed and can be activated by pressing the Programming button on the remote control for 3 seconds. The motorcycle indicators will flash 10 times then stop.

Pressing the Programming button during the directional indicator flashes will cause the flashing to stop (Note: No need to press and hold).

The DT202 cannot be disarmed whilst the Bike finder Function is operational, triggering the alarm, during the bike finder flashes will stop the flashes.

Panic Alarm

NOTE: The Panic Alarm does not operate with the ignition ON.

The DT202 offers a 'Panic Alarm' facility that will cause the DT202 siren to sound and the motorcycle indicators to flash to attract attention. To activate the Panic Alarm, hold down the Arm/Disarm button on the remote control for 3 seconds with the motorcycle ignition turned off.

To cease the Panic Alarm, press the Arm/Disarm button on the remote. The Panic Alarm will run for approximately 5 minutes unless stopped by the remote control.

If the DT202 is disarmed with ignition off, then pressing and holding the Arm/Disarm button for 3 seconds will first arm the DT202 before triggering the Panic Alarm. If the DT202 is in the armed state, then pressing and holding the Arm/Disarm button for 3 seconds will disarm the DT202 before triggering the Panic Alarm feature. If the Arm/Disarm button is pressed a second time to stop the Panic feature the alarm will always reset to the disarmed state regardless of the previous state. If the Panic alarm is allowed to complete the 5 minute duration, then the alarm system will finish in the armed state.

Battery Monitoring

The DT202 monitors the motorcycle battery voltage and, when the DT202 is armed, flashes the motorcycle instrument LED at a variable rate to notify the measured battery voltage. The LED flash rate is as follows:

Measured Voltage ¹	LED Sequence ²	Indicative Status
Greater or equal to 11.5 V	Once every 5 seconds	Fully charged battery
Between 11.5V and 10.5 V	Once every 10 seconds	Partially discharged battery
Less than or equal to 10.5 V	Once every 20 seconds	Low battery

Lead Acid Battery

¹ Voltages are approximate

² If the movement sensor is disabled, either by use of Transport Mode or via programming then the status LED will flash twice in quick succession to indicate that the movement sensor has been disabled, if the movement has been permanently disabled via programming the indicators flash three times on arming and if arm/disarm tones are enabled, three chirps will be heard.



Lithium Battery

Measured Voltage ¹	LED Sequence ²	Indicative Status
Greater or equal to 13.2 V	Once every 5 seconds	Fully charged battery
Between 13.2V and 12.4 V	Once every 10 seconds	Partially discharged battery
Less than or equal to 12.4 V	Once every 20 seconds	Low battery

¹ Voltages are approximate

² If the movement sensor is disabled, either by use of Transport Mode or via programming then the status LED will flash twice in quick succession to indicate that the movement sensor has been disabled, if the movement has been permanently disabled via programming the indicators flash three times on arming and if arm/disarm tones are enabled, three chirps will be heard.

Optional Supplementary Siren Output

The DT202 allows for the addition of an optional second siren using the Optional Supplementary Siren Output, if used with a suitable siren this can increase the output volume when the alarm is sounding.

Alternatively, the output can be connected to a pager input, allowing a notification to be received on your pager device in the event of an alarm trigger occurring.

If you would like to use the Optional Supplementary Siren output feature speak to your installing dealer.

Optional Secondary Trigger

The Optional Secondary Trigger allows the motorcycle or its accessories to be protected in the following ways listed below, it may only be possible to use one of the methods listed below at a time and some options may not be available on certain models of motorcycle.

• Closed Loop – This allows a loop of wire to pass around an accessory or luggage attached to the motorcycle. Should the cable be cut to remove the accessory or luggage with the alarm in an armed condition the alarm will trigger.

Please note the cable should be fully in place and the connected before arming the alarm.

- Additional Locker Protection Additional magnetic reed switches can be added to
 protect a seat, panel or storage compartment, if installed an alarm trigger will occur if
 a seat, panel or storage compartment be open or removed that has a switch installed.
- •

Please note all protected seat, panel and storage compartments should be fully in position or closed before arming the alarm system.

• Side Stand – If connected the alarm will monitor the state of the side stand when armed, if the position of the side stand is changed during the armed period of the alarm system the alarm will trigger.

Please note it is recommended that if using the side stand as a secondary trigger the motorcycle is left on side stand and not the main stand for maximum protection.

If you would like to use the Optional Secondary Trigger speak to your installing dealer.



Diagnostics

When the DT202 is disarmed via a remote control, a long chirp is given followed by a series of short chirps signifying the DT202 has been triggered.

The diagnostic code can be repeated by switching the ignition on and off, unless the alarm has been rearmed or the ignition has been switched on for 60 seconds or more at which point the code will be erased.

The explanation for the Bleeps is as follows;

Flash Count	Circuit Triggered
One	Ignition
Тwo	ECU Protection Switch
Three	Secondary Trigger Input
Four	Tilt Sensor
Five	Panic Feature
Six	Power Removal
Seven	Accelerometer Failure
Eight	Software Error

Troubleshooting

If the DT202 does not react to the remote control when arming or disarming check the following:

- LED Indicator is illuminating on the remote when the Arm/Disarm button is pressed. If notreplace the remote control battery.
- Operate the remote directly adjacent to the motorcycle in case of local radio frequency (RF) interference.
- If a local source of RF interference is identified, move the motorcycle away from the area and attempt to operate the DT202 again.



- It is important that the internal battery in the DT202 is not left in a discharged condition.
- If the DT202 internal battery is left discharged it will result in damage to the battery.
- If the motorcycle is to be left unused for any period beyond two weeks it should be connected to an appropriate battery conditioner to maintain good battery condition.
- Battery issues resulting from impropermaintenance are not covered under warranty.

Customising the System

The DT202 has been designed to be simple to operate and to allow certain features to be programmed to suit personal preference or requirements. The user programmable options are:

- Arm/Disarm tones quiet, loud or off (default)
- Automatic Rearming on or off (default)
- Passive Arming at ignition off activate at 30 seconds, 60 seconds or off (default)
- Battery type lead acid (default) or lithium ion

NOTE: Sensitivity movement can only be adjusted by an installing dealer.



Programming Guide

To customise the DT202 features to the user preferred options follow the programming guides below.

To adjust the arm/disarm tone

- 1. Disarm the DT202.
- 2. Turn on the ignition.
- 3. Within 10 seconds, press and **hold** both buttons on the remote control.
- 4. After 3 seconds the DT202 will start to chirp loudly. Release the remote control buttons after the first chirp, if you miss the correct chirp wait for the alarm to exit programming mode after the seventh chirp or turn off the ignition a loud chirp will be given to indicate programming has been exited.
- 5. Once programming mode is entered the DT202 will bleep a specified number of times to indicate the current setting, the LED will flash the current setting repeatedly.
- 6. Press the Arm/Disarm or Programming button on the remote control to cycle through the tone options:
- Off (1 Bleep) (Default)
- Quiet (2 Bleeps).
- Loud (3 Bleeps).
- 7. Turn off the ignition to exit programming and save the new setting a loud chirp will be given. If the ignition is not switched off within 30 seconds the DT202 will give a loud chirp and the currently selected setting will be stored.

To adjust the Automatic Rearm

- 1. Disarm the DT202.
- 2. Turn on the ignition.
- 3. Within 10 seconds, press and **hold** both buttons on the remote control.
- 4. After 3 seconds the DT202 will start to chirp loudly. Release the remote control buttons after two chirps, if you miss the correct chirp wait for the alarm to exit programming mode after the seventh chirp or turn off the ignition a loud chirp will be given to indicate programming has been exited.
- 5. The DT202 will bleep a specified number of times to indicate the current setting, the LED will flash the current setting repeatedly.
- 6. Press the Arm/Disarm or Programming button on the remote control to cycle through the automatic rearm options:
- Off (1 Bleep) (Default).
- On (2 Bleeps).
- 7. Turn off the ignition to exit programming and save the new setting a loud chirp will be given. If the ignition is not switched off within 30 seconds the DT202 will give a loud chirp and the currently selected setting will be stored.

To adjust the Passive Arming time

- 1. Disarm the DT202.
- 2. Turn on the ignition.
- 3. Within 10 seconds, press and **hold** both buttons on the remote control.



- 4. After 3 seconds the DT202 will start to chirp. Release the remote control buttons after three chirps, if you miss the correct chirp wait for the alarm to exit programming mode after the seventh chirp or turn off the ignition a loud chirp will be given to indicate programming has been exited.
- 5. The DT202 will bleep a specified number of times to indicate the current setting, the LED will flash the current setting repeatedly.
- 6. Press the Arm/Disarm or Programming button on the remote control to cycle through the automatic arming options:
 - Off (1 Bleep) (Default)
 - 30 second delay (2 Bleeps)
 - 60 second delay (3 Bleeps)
- 7. Turn off the ignition to exit programming and save the new setting a loud chirp will be given. If the ignition is not switched off within 30 seconds the DT202 will give a loud chirp and the currently selected setting will be stored.

To choose the motorcycle battery type

- 1. Disarm the DT202.
- 2. Turn on the ignition.
- 3. Within 10 seconds, press and **hold** both buttons on the remote control.
- 4. After 3 seconds the DT202 will start to chirp loudly. Release the remote control buttons after four chirps, if you miss the correct chirp wait for the alarm to exit programming mode after the seventh chirp or turn off the ignition a loud chirp will be given to indicate programming has been exited.
- 5. The DT202 will bleep a specified number of times to indicate the current setting, the LED will flash the current setting repeatedly.
- 6. Press the Arm/Disarm or Programming button on the remote control to cycle through the motorcyclebattery options:
 - Lead Acid (1 Bleep) (Default).
 - Lithium (2 Bleeps).
- 7. Turn off the ignition to exit programming and save the new setting a loud chirp will be given. If the ignition is not switched off within 30 seconds the DT202 will give a loud chirp and the currently selected setting will be stored.

To reset the DT202 to the default settings

- 1. Disarm the DT202.
- 2. Turn on the ignition.
- 3. Within 10 seconds, press and **hold** both buttons on the remote control.
- 4. After 3 seconds the DT202 will start to chirp loudly. Release the remote control buttons after five chirps, if you miss the correct chirp wait for the alarm to exit programming mode after the seventh chirp or turn off the ignition a loud chirp will be given to indicate programming has been exited.
- 5. The DT202 will bleep once and the LED repeatedly once every three seconds.
- 6. Press the Arm/Disarm button on the remote control once, the DT202 will bleep twice and the LED will double flash repeatedly
- 7. Press both buttons on the remote control to save the default settings a loud chirp will be given and the alarm will exit programming.



To add a new remote control

- 1. Disarm the DT202.
- 2. Turn on the ignition.
- 3. Within 10 seconds, press and **hold** both buttons on the remote control.
- 4. After 3 seconds the DT202 will start to chirp. Release the remote control buttons after six chirps, if you miss the correct chirp wait for the alarm to exit programming mode after the seventh chirp or turn off the ignition a loud chirp will be given to indicate programming has been exited.
- 5. The DT202 will give a single bleep and flash the LED repeatedly once every three seconds.
- 6. Press either button on the current remote control two bleeps will be given and the LED will double flash repeatedly.
- 7. Press both buttons together on the remote control, the DT202 will bleep twice and the LED will extinguish
- 8. Press either button on the first remote control to be added, the DT202 will bleep once and the LED will flash once indicating the number of remote controls programmed.

NOTE: After programming the first remote control all other remote controls will be deleted.

- 9. Press either button on the following remote controls to be added, the DT202 will bleep once and the LED will flash an extra flash each time a remote control is programmed indicating the number of remote controls programmed.
- 10. Turn off the ignition to exit programming and save the new settings.

RF Device:	433MHz, <1mW ERP
Supply voltage range	9VDC to 16VDC
Supply current disarmed, no internal battery charge	3.1±0.2mA
Maximum supply current disarmed or armed charging internal battery	26mA±0.5mA
Average supply current fully armed	2.9mA±0.1mA
Maximum supply current [long term storage mode]	0.02mA
Maximum directional indicator power per channel	2 x 10W

Technical Specification

List of Batteries Contained Within the Equipment

ECU: Varta, NiMH, 6 button cells, 7.2V nominal. (Rechargeable) Remote Control: Long life lithium, CR2450, 3V (None Rechargeable)



Battery Disposal Instructions:

Battery should not be disposed of with general household waste. Bring damaged or worn out batteries to your local recycling centre or dispose of them in battery recycle bins that can be found in store.



Keep batteries out of the reach of children.



F.A.Q.

Which battery does the remote control use?

The replacement battery for the remote control is the CR2450 and is a long life lithium battery.

Alarm does not respond when the remote control is pressed.

Check the LED light on the remote control illuminates when the button is pressed. if the LED light does not illuminate or looks dim change the battery on the remote control, the battery is a long life lithium battery part number CR2450.

Note: For the alarm system to function correctly it is imperative that the motorcycle battery is fully charged.

Alarm triggers randomly LED diagnostic feedback displays four flashes indicating inclination sensor.

If the motorcycle is being transported the inclination sensor must be disabled using `Transport Mode' to prevent false triggering of the alarm. If the motorcycle is not being transported and false triggering occurs the inclination sensor sensitivity may be set to high, the installing dealer will be able to adjust the sensitivity.

Alarm triggers LED diagnostic feedback displays two flashes indicating ECU protection switch.

The ECU protection switch is mounted onto the seat or a panel that must be removed before it would be possible to access the alarm unit, the switch consists of two parts the reed switch and the magnet. The magnet must be close to the reed switch whenever the alarm is armed, once separated the alarm will trigger.

Ensure both the reed switch and magnet are installed and have not been damaged or the position altered from that of the original installation. Contact the installing dealer if this does not remedy the issue.

Warranty

Datatool DT202 is provided with a comprehensive 2-year warranty in addition to your statutory rights, designed to combat any material or manufacturing defects which become apparent within 2 calendar years from the date of first installation. In the unlikely event of repairs being required under the provided warranty, please contact the installing dealer for assistance.



The full text of the UK Declaration of Conformity and EC Declaration of Conformity is available on the Scorpion Automotive website which can be accessed through the following links:

UK Declaration of Conformity - https://www.scorpionauto.com/uk-scorpion-automotive-doc/ EC Declaration of Conformity - https://www.scorpionauto.com/ec-scorpion-automotive-doc-2/

Datatool is a brand of Scorpion Automotive Ltd Scorpion House, Drumhead Road, Chorley North Business Park, Chorley, Lancashire, England. PR6 7DE Tel: +44 (0) 1257 249928 E mail: info@datatool.co.uk Web: http://www.datatool.co.uk