Q
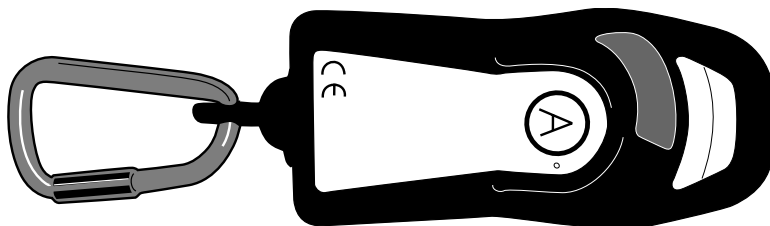
QT412RXA / QT412RXCA

CE

RECHARGEABLE DUAL-ACTION INFRARED / RADIO TRANSMITTER

## READ ALL OF THESE INSTRUCTIONS BEFORE USING THIS TRANSMITTER

IF YOU INTEND TO USE THIS TRANSMITTER WITH AN 800 SERIES CALL SYSTEM, REFER TO THE SEPARATE INSTRUCTION BOOKLET, DOCUMENT NO. DNU4120002.

Quantec's QT412 transmitters allow users to activate calls on a Quantec system. They have a typical infrared (IR) transmitting range of 10 metres (line of sight) and a typical radio frequency (RF) transmitting range of approx. 60 metres, dependent on physical conditions / environmental factors.

Each transmitter has two IR emitter windows (one on each side to maximise performance), two buttons (A & B) and a retained 'pull clip'.

Depending on the model purchased, pressing its buttons, or activating its pull clip, will generate the following levels of call on compatible Quantec IR call points, IR ceiling receivers and/or RF receivers.

PULL CLIP MECHANISM

PUSH BUTTONS

IR EMITTER WINDOWS

MARKABLE TEXT BOXES
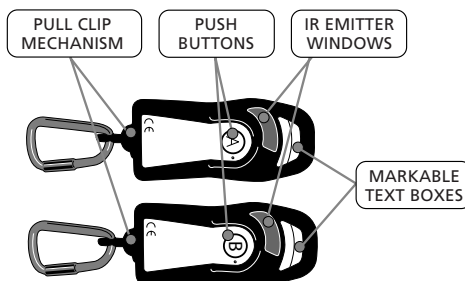
Model No.	Button A	Button B	Pull Clip
QT412RXA	Attack Call	Attack Call	Attack Call
QT412RXCA	Standard Call	Standard Call	Attack Call

Note that different levels of call to those listed above can be generated, if required. However, to do this the transmitter must be reconfigured by an experienced engineer using a QT423 Configurator (see page 4 for details). Note these instructions explain how to use standard factory-supplied QT412RXA and QT412RXCA transmitters only.
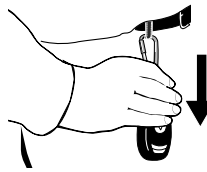
> ⚠ **IMPORTANT**
>
> • The transmitter must be charged for a period of 14 hours before it is first used - see **RECHARGING THE TRANSMITTER**, page 3.
>
> • If using the transmitter with an existing Quantec system please refer to **COMPATIBILITY ISSUES**, page 4.

OVERVIEW & OPERATION

This transmitter allows you to take advantage of Quantec's optional staff attack facility and operates as follows:

• Designated staff attach the transmitter to their uniforms using the Karabiner clip (supplied).

• In the event of an attack, staff activate the transmitter by releasing its retained pull clip (QT412RXA and QT412RXCA models) or by pressing and holding one of its buttons (QT412RXA models only). This will fill the area with IR and RF signals - see illustrations, right.

PULL THE TRANSMITTER DOWN SHARPLY UNTIL ITS PULL CLIP RELEASES AND LET GO!

• Upon activation, the transmitter sounds a short 'confidence' beep and its LEDs illuminate green for approximately half a second to confirm that an attack call is being transmitted. Note that a different sequence of beeps and LED indication indicates that the transmitter needs recharging - see **TRANSMITTER BATTERY**, page 3 for further details.

PRESS AND HOLD BUTTONS A OR B UNTIL YOU ARE CONFIDENT A CALL HAS BEEN REGISTERED

TAKE CARE NOT TO OBSTRUCT THE TRANSMITTER'S TWO INFRARED EMITTER WINDOWS WHEN MAKING A CALL

• The IR and RF signals generated by the transmitter are picked up by any Quantec IR call points, IR ceiling receivers and/or RF receivers within its range which inform Quantec that an attack is taking place.

• An urgent, piercing alarm is sounded throughout the building (as programmed) and the exact location of the attack is indicated at all relevant displays to facilitate the quick response of security staff.

Note that in addition to being able to generate an attack call via its retained pull clip, the QT412RXCA transmitter will generate a standard call when either of its two buttons are pressed. Standard calls are transmitted to compatible IR and RF receivers in exactly the same way as attack calls and are reported around the Quantec system as programmed.

For security reasons attack calls can only be reset by entering a special code at the Quantec Controller or a Display with controls. Refer to the Quantec Main Manual for details.

IR / RF TRANSMISSION TIMES

Calls triggered from either of the transmitter's buttons will transmit for a maximum of 45 seconds (IR) and 30 seconds (RF) whilst pressed and for 2-3 seconds after release.

Calls triggered via the transmitter's pull clip will transmit for a maximum of 45 seconds (IR) and 30 seconds (RF) and for 2-3 seconds after it has been returned to its retained position.

The transmitter will sound a short confidence beep once every 3 seconds throughout its IR/RF transmission period and its LEDs will flash green. When the transmission period is complete, the transmitter will sound three quick beeps and its LEDs will flash red three times in quick succession to confirm it has returned to its normal state.

Please note you will be unable to make a new attack call until the transmitter's pull clip has been returned to its retained position (the transmitter's button operation will be unaffected).

RESETTING THE TRANSMITTER'S PULL CLIP

To return the transmitter's pull clip to its retained position, gently push its two outer prongs inwards until the mechanism snaps back into place, as shown in the diagram, right.
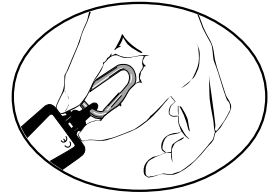
TRANSMITTER BATTERY

The transmitter's battery is rechargeable (NiMH). If left for extended periods, or after periods of heavy usage without recharge, the battery may run flat. If this happens charge the unit immediately for the full recharge period (see below). Please note that the battery is not a user serviceable part and must be returned to your Distributor for repair or replacement. Under normal conditions the unit will be fit for in excess of 500 charge/discharge cycles, before requiring battery replacement.

Feedback on the condition of the transmitter's battery is provided every time it is activated.
• When fully charged, a short 'confidence' beeper sounds and the transmitter's LEDs illuminate green for approximately half a second.
• When running low, two beeps sound in quick succession and the transmitter's LEDs flash green twice. Although the transmitter will still work in this state, it must be recharged.
• When critically low, three fast beeps sound and the transmitter's LEDs flash red. The transmitter will be unable to transmit IR and RF calls and should be recharged immediately.
• Also, the Quantec system logs low battery signals at the Quantec Controller. This log will need to be accessed to find out which units need their batteries charging (see **COMPATIBILITY ISSUES**, page 4.)

RECHARGING THE TRANSMITTER

The transmitter must be charged using a QT424/1 single-way charger or a QT424/10 ten-way charging unit for a period of 14 hours before it is first used. It should then be regularly recharged (typically once a month, or more if usage demands it). Do not use any other type of charging unit as this could damage the transmitter and void its warranty.

To charge the transmitter using the QT424/1 charger, simply connect the charger to a standard 13 A mains socket and to the 1.3 mm socket located next to the transmitter's pull clip as shown (right). To charge using the QT424/10 charger, please refer to the separate instructions supplied with the charger.

Whilst charging, the transmitter's two LEDs illuminate red and when fully charged, the transmitter's LEDs will flash red. Always test the transmitter before using it is re-issued to its user.
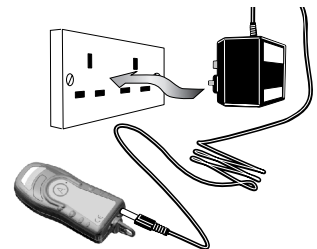
TESTING THE TRANSMITTER

A Quantec IR test receiver, the QT302RT, is available to verify the correct IR operation of all QT412 range transmitters. It is recommended that at least one is used per system. Please be aware when testing the transmitter's IR operation that any RF receivers within its range may trigger at the same time.

WARNING: This transmitter should be regarded as a piece of life safety equipment. If not sufficiently charged and regularly tested, the safety of those on site could be compromised. Ensure systems are in place to guarantee the correct functionality of the transmitter at all times.

RECONFIGURING THE TRANSMITTER (OPTIONAL)

The QT423 Configurator allows the operation of a QT412 range transmitter to be tailored to suit the requirements of a specific site. It allows authorised engineers to:

(Note: The available level of calls available include Attendance, Standard Call, Presence, Help Required, Reset, Emergency and Attack. See **COMPATIBILITY ISSUES**, below.)

- Assign the level of call that will be triggered when the transmitter's A button is pressed
- Assign the level of call that will be triggered when the transmitter's B button is pressed.
- Assign the level of call that will be triggered when the transmitter's pull clip is activated.
- Set the transmitter's A & B buttons so they only trigger a call when both are pressed at the same time.
- Turn the transmitter's 'confidence' beeper on or off (for button A, B and/or the transmitter's pull clip).
- Turn the transmitter's RF action on or off (for button A, B and/or the transmitter's pull clip).
- Set the transmitter's transmission time to run continuously or to automatically switch off after a pre-determined time.
- Set the transmitter's User ID code (from 0 to 255). See **COMPATIBILITY ISSUES**, below.
- Assign the transmitter an RF Group Address (0 to 15) to match the set up of any Quantec RF receivers on the system and prevent inadvertent triggering of any local receivers.
- Change the transmitter's mode of IR transmission to 'pulsed' to suit Quantec IR receivers manufactured before 1/10/99 (see **COMPATIBILITY ISSUES**, below).

Refer to Document No. DNU0423000 for further details about the Quantec Configurator.

QT412RXA / QT412RXCA TECHNICAL SPECIFICATION (FACTORY DEFAULTS)

Radio frequency . . . . (RF868.3 MHz - this product is license exempt as per EN 300 220)
RF Range . . . . 60 metres*
Infrared . . . . 940 nm modulated @ 38 Khz
Infrared Range . . . . 10 metres line of sight*
Default transmission times on activation (autostop) . . . . IR = 45 secs; RF = 30 secs**
Weight (including battery) . . . . 70 grams
Dimensions (main body) W x H x D . . . . 45 mm x 115 mm x 25 mm
Pull clip actuation force . . . . 1.5 kg / 15 Newtons
Battery. . . . . Rechargeable NiMHydride (not user serviceable)
* dependent on receiver, physical conditions and environmental factors.
** In accordance with European regulatory standards.

COMPATIBILITY ISSUES

THESE TRANSMITTERS ARE NOT COMPATIBLE WITH QUANTEC IR CALL POINTS, IR CEILING RECEIVERS AND RF RECEIVERS MANUFACTURED <u>BEFORE</u> YEAR 2000.

THE NEW FEATURES, 'USER ID', 'LOW BATTERY SIGNALS' AND 'ATTENDANCE', DESCRIBED IN THIS INSTRUCTION, WILL ONLY WORK ON COMPATIBLE QUANTEC SYSTEMS MANUFACTURED <u>AFTER</u> 1 JULY 2010. IF IN DOUBT, PLEASE CONTACT YOUR VENDOR FOR ADVICE.

Q QT432/QT432A

CE

INFRARED (IR) / RADIO FREQUENCY (RF) PENDANT TRANSMITTER

⚠ IMPORTANT NOTE ABOUT COMPATIBILITY

The QT432 and QT432A pendant transmitters are not compatible with Quantec IR call points, IR ceiling receivers and RF receivers manufactured before year 2000. The new features, 'User ID', 'Low Battery Warning' and 'Attendance Calls', described below, will only work on compatible Quantec systems manufactured after 1 July 2010. If in doubt, please contact your vendor for advice.

ITEMS SUPPLIED

1 x QT432 IR/RF patient pendant or QT432A IR/RF attendance pendant (batteries included)
1 x lanyard (90 cm end-to-end length, breakaway safety type)
1 x sheet of coloured markable labels
1 x user instruction (this document)

TRANSMITTER FEATURES

The QT432 and QT432A pendant transmitters (shown right) allow users to activate calls on a Quantec system. They have the following features:

• designed to be worn around a patient's neck using a lanyard (supplied).

• the transmitter generates both IR and RF signals when its pushbutton is pressed. These signals are sent to Quantec IR call points, IR ceiling receivers and RF receivers (RF signals can be enabled or disabled).

• the Quantec Controller is sent a 'low battery warning' signal if the transmitter's battery charge is running low.

TRANSMITTING SIGNAL AREA

CONFIDENCE LIGHT (RED)

PUSHBUTTON (ORANGE)

MARKABLE LABEL

LANYARD ATTACHMENT

• each transmitter can be configured to generate different call levels including Call, Presence, Help Required, Reset, or Attendance*. The default factory settings are Call (for the QT432) & Attendance (for the QT432A).

• each transmitter can be assigned a unique 'User ID' enabling Quantec to identify the caller by name. User ID's can be written on markable labels (supplied) in different colours to identify transmitters programmed with different call levels.

• the default call level and User ID assigned to a transmitter, can be changed by using the Quantec Configurator (see 'RECONFIGURING THE TRANSMITTER' overleaf for details).

*Attendance calls are only available with the QT432A.*
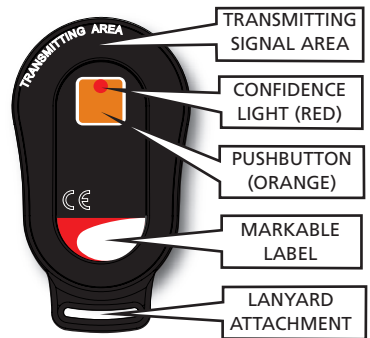
TRANSMITTER OPERATION

1. To activate the transmitter PRESS its orange pushbutton. This will fill the local area with IR and RF signals (if enabled).

2. Upon activation, the transmitter's confidence light flickers red to confirm that a signal is being transmitted.

3. The IR and RF signals generated by the transmitter are picked up by compatible IR call points, IR ceiling receivers and/or RF receivers within range of the transmitter.

4. The appropriate call response is performed by the Quantec system and the transmitter's call level, location and User ID are indicated at all relevant displays.

⚠ **IMPORTANT NOTE ABOUT IR TRANSMISSION**

As with most IR transmitters, the pendant emits directional IR signals with varying strengths (shown right). When triggered in the proximity of an IR receiver the pendant can be held in most orientations, as the IR signal will scatter and bounce to locate the receiver. A clear line of sight from transmitter to receiver is not essential.

At the extremities of the pendant's operating range (10 m), the IR signal becomes more directional and requires a clearer line of sight from transmitter to receiver. In this mode, performance is improved if the pendant is orientated in the direction of an IR receiver when triggered. Also, to improve transmission coverage, use more IR call points and IR ceiling receivers (installed no greater than 10 m apart).

IR DIRECTION AND SIGNAL STRENGTH (SHOWN BELOW)
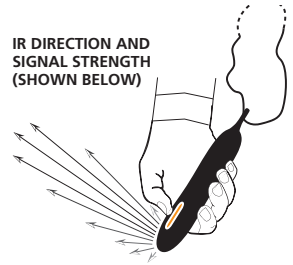
DO NOT COVER THE MAIN TRANSMITTING AREA WHEN PRESSING THE BUTTON (SHOWN ABOVE)

TRANSMITTER BATTERY

The transmitter uses a 12 V battery, type A23/23A (8LR50) alkaline. It is a <u>non-rechargeable</u> battery. Do not use any other type of battery as this could damage the transmitter and void its warranty. Dispose of the battery following the manufacturers' recommended procedures.

The battery life depends on frequency of use but typically is between 6 to 12 months. Note: After activation, the transmitter's confidence light flashes once to confirm the battery is OK and flashes twice when the battery charge is low. Also, Quantec's datalogger records low battery signals; this log will need to be accessed to find out which units need their batteries changing.

(COVER REMOVED)

IR & RF Emitters

12 volt battery

securing screw

To change the battery, simply remove the transmitter's back cover by removing the small self-tapping screw, remove the used battery and replace with a new one (shown right). **Note: If you have changed a battery, always test the transmitter before it is re-issued to its user.**
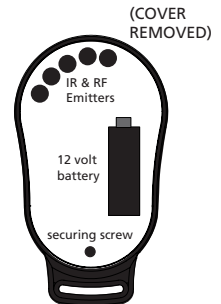
TESTING THE TRANSMITTER

The QT302RT Quantec test IR ceiling receiver verifies the correct IR operation of all QT432/QT432A transmitters. It is recommended that at least one is used per system. Please be aware when testing the transmitter's IR operation that any radio receivers within its range may trigger at the same time.

RECONFIGURING THE TRANSMITTER (OPTIONAL)

The QT423 Quantec Configurator enables the operation of a QT432/QT432A transmitter to be tailored to suit the requirements of a specific site. It allows an engineer to assign different call levels to a transmitter, turn off a transmitter's RF emitter, set a transmitter's User ID code (from 0 to 255) and set a transmitter's RF Group Address (from 0 to 15).

Refer to Document No. DNU0423000 for further details about the Quantec Configurator.

QT432/QT432A TECHNICAL SPECIFICATION (FACTORY DEFAULTS)

Infrared . . . . 940 nm modulated @ 38 KHz
Infrared range . . . . 10 metres line of sight**
Radio frequency . . . . (RF868.3 MHz - this product is license exempt as per EN 300 220)
Radio range . . . . 60 metres**
Weight (including battery) . . . . 30 grams
Overall dimensions (main body) W x H x D . . . . 47 mm x 83 mm x 15.5 mm
Ingress Protection rating . . . . IP 41
Battery . . . . 12 volt, type A23/23A (8LR50) alkaline (non-rechargeable)

*** Dependent on receiver, physical conditions and environmental factors.*