



REL



**REL**  
ACOUSTICS LTD.



Operating Instructions for the

# **SerieHT Sub-Bass System**



## Caution Marking Explanation




The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of un-insulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## Important Safety Instructions

- 1 Read all of these instructions.
  - 2 Save these instructions for future use.
  - 3 Heed all warnings.
  - 4 Follow all instructions.
  - 5 Do not use this apparatus near water.
  - 6 Clean only with damp cloth.
  - 7 Install in accordance with the manufacturer's instructions.
  - 8 Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
  - 9 Do not defeat the safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
  - 10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
  - 11 Only use attachments/accessories specified by the manufacturer.
  - 12 Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 
- 13 Unplug this apparatus during lightning storms or when unused for long periods of time.
  - 14 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

- 15 Minimum distances 10cm around the apparatus for sufficient ventilation.
- 16 The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, table-cloths, curtains, etc.
- 17 No naked flame sources, such as lighted candles, should be placed on the apparatus.
- 18 Attention should be drawn to the environmental aspects of battery disposal.
- 19 The use of apparatus in moderate climates.
- 20 Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

**Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.**

### **Warning**

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on apparatus.

The mains plug is used as disconnect device. The mains plug of the apparatus should not be obstructed OR should be easily accessed during intended use. To be completely disconnected from the power input, the mains plug of the apparatus shall be disconnected from the mains.

An appliance with a protective earth terminal should be connected to a mains outlet with a protective earth connection.

### **Design Safety**

This apparatus is supplied with a detachable mains cord. For 240V operation a 7A fuse is fitted in the socket, for 120V operation a 15A fuse is fitted. Should the fuse need to be replaced use a similar rated fuse approved to ASTA or BSI 362 standards. Do not use without the fuse cover in place. Replacement fuse covers are available from your distributor.

## Attention Explication Marquage



L'éclair avec le symbole de pointe de flèche dans un triangle équilatéral est destiné à alerter l'utilisateur de la présence de non isolée tension dangereuse à l'intérieur de l'enceinte du produit qui peut être d'une ampleur suffisante pour constituer un risque d'électrocution pour les personnes.



Le point d'exclamation dans un triangle équilatéral est destiné à alerter l'utilisateur de la présence d'instructions dans la documentation accompagnant l'appareil exploitation et de maintenance (entretien).

## Informations Importantes Relatives a la Securite

- 1 Lisez attentivement ces instructions.
- 2 Conservez ces instructions.
- 3 Respectez tous les avertissements.
- 4 Suivez toutes les instructions.
- 5 Ne pas utiliser cet appareil près de l'eau.
- 6 Nettoyer uniquement avec un chiffon humide.
- 7 Installer conformément aux instructions du fabricant.
- 8 Ne pas installer près de sources de chaleur telles que des radiateurs, registres de chaleur, poêles ou autres appareils (y compris les amplificateurs) qui produisent de la chaleur.



- 9 Ne pas contourner le dispositif de sécurité de la prise de terre. Une fiche de terre a deux lames et une troisième broche de mise à la terre. La troisième broche est fournie pour votre sécurité. Si la fiche fournie ne rentre pas dans votre prise, consultez un électricien pour le remplacement de la prise obsolète.
- 10 Protégez le cordon d'alimentation ne soit piétiné ou pincé, en particulier au niveau des fiches, des prises de courant, et le point de sortie de l'appareil.
- 11 Utilisez uniquement des fixations/accessoires spécifiés par le fabricant.
- 12 Utilisez seulement avec un chariot, stand, trépied, support ou table spécifié par le fabricant, ou vendu avec l'appareil. Lorsque vous utilisez un chariot, soyez prudent lorsque vous déplacez l'ensemble chariot/appareil pour éviter les blessures en cas de chute.



- 13 Débranchez cet appareil pendant un orage ou lorsqu'il est inutilisé storsm pour de longues périodes de temps.
- 14 Confiez toute réparation à un personnel qualifié. Une réparation est nécessaire lorsque l'appareil a été endommagé de quelque façon que ce cordon d'alimentation ou la fiche est endommagé, du liquide a été renversé ou des objets sont tombés dans l'appareil, l'appareil a été exposé à rail ou à l'humidité, ne fonctionne pas normalement, ou a été échappé.
- 15 10cm distance minimale autour de l'appareil pour une aération suffisante.
- 16 Il convient que l'aération ne soit pas gênée par l'obstruction des ouvertures d'aération par des objets tels que journaux, nappes, rideaux, etc.
- 17 Il convient de ne pas placer sur l'appareil de sources de flammes nues, telles que des bougies allumées.
- 18 Il convient d'attirer l'attention sur les problèmes d'environnement dus à la mise au déchet des piles.
- 19 Si l'appareil est destiné à être utilisé sous un climat tempéré.
- 20 Les batteries ne doivent pas être exposées à une chaleur excessive telle que celle du soleil, d'un feu ou d'origine.

**Attention: Tout changement ou modification non expressément approuvés par la partie responsable de la conformité pourraient annuler l'autorité de l'utilisateur à utiliser cet équipement.**

## **Avertissement**

Cet article est lourd. Pour éviter tout risque de blessure, prendre soin lors de la manipulation.

L' appareil ne doit pas être exposé à des éclaboussures et aucun objet rempli de liquide, comme des vases, ne doit être placé sur l'appareil.

Les conduites Plus est utilisé comme dispositif de déconnexion. La fiche de l'appareil ne doit pas être obstruée OU doit être facilement accessible pendant l'utilisation. Pour être complètement déconnecté de l'alimentation électrique, le cordon d'alimentation de l'appareil doit me débranché.

Un appareil avec une borne de terre doit être branché sur une prise de courant en étant relié à la terre.

## **Sécurité Design**

Cet appareil est livré avec un cordon amovible cordon. Pour le Fonctionnement d'un fusible de 240V 7A est montée la douille, pour le fonctionnement de 120V un fusible de 15A est monté. Si le fusible doit être remplacé utilisation un fusible similaire approuvé pour ASTA ou BSI normes 362. Ne pas utiliser sans le couvercle de fusible en place. Les couvercles de rechange sont disponibles auprès de votre distributeur.

## **FCC STATEMENT**

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.

**NOTE:** 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 the 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 and correct the interference by one or more 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.*

## Dear Friend and Valued Customer

Dear REL Owner,

Thank you for the purchase of your new SerieHT, a new direction in the evolution of subwoofers for REL. You see, for more than a quarter century, REL have built the most remarkable dual-purpose powered subwoofers; we call them Sub Bass Systems. Subs capable of rendering music at an unimaginably high level, yet also able to pound out powerful theater when called upon to do so.

But what if we didn't require both to be accomplished with equal facility? What if we built a purpose-specific range designed, in the case of HT, just to deliver devastating home theater bass? Might we not be able to deliver more output, more of the extreme volume levels theater can call for at lower cost than a true dual-purpose fully specified traditional REL?

The answer is an unqualified "Yes"! HT delivers extreme levels of output and the truly visceral thrill of movies and does so at a cost that is incredibly affordable.

For REL traditionalists, these have something to offer the existing system owner interested in upgrading their theater experience, yet very happy with their REL's musical performance. HT makes it possible to upgrade and update their theater, whilst retaining their original classic RELs for a cost that is a small fraction of their system. And do so without needing to trade-in anything from their former system to obtain an enormous upgrade in the performance of their theater. HT delivers this without otherwise negatively affecting the performance of their existing high end 2- channel system.

We believe HT will open up the world of REL to a large body of enthusiasts, old and new, and in doing so deliver the magical world of theater sound in a uniquely REL way.

Enjoy Your Time at the Movies!

Best,


John Hunter  
Lead Designer, Owner


## REL SerieHT Rear Panel Connection Legend

- 1 Power Pilot Light:** Power On/Off indicator.
- 2 Off/ On/Auto Switch:** Used to toggle between Off (Left), Always On (middle) and Auto On mode (right).
- 3 Phase:** Used to set phase **0-180 degrees**.
- 4 Crossover:** Used to adjust crossover frequency. Variable between 40-250Hz.
- 5 Level:** Volume control for Input.
- 6 Left & Right Channel Low-Level RCA Input:** Used to connect low-level signals to the sub-bass system from the output of a preamplifier, integrated amplifier or receiver.  
(For home cinema use, use .1/LFE input)
- 7 RCA Output:** Used to connect or “daisy chain” another REL in tandem.
- 8 Power On/Off Switch:** Use to turn unit on or off.
- 9 Mains Select Switch:** Slide switch used to set input AC between 120VAC and 230VAC.
- 10 IEC Mains Socket:** Fused mains (AC) input socket that accepts detachable power cord.

BRIDGEND, WALES U.K.





WWW.REL.NET

⊕  
STATUS ○ **1**  
OFF  ON ONLY AUTO **2**

0  180 PHASE PHASE **3**

100Hz  
○  
CROSSOVER CROSSOVER **4**  
40Hz LFE


○  
LEVEL LEVEL **5**  
MIN MAX

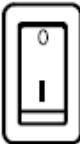
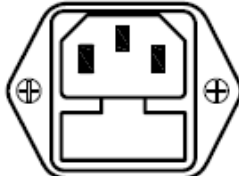
LOW LEVEL  
IN   **6**  
OUT   **7**  
LOW .1 / LFE



⊕  
**REL**  
ACOUSTICS LTD  
⊕

⊕ **HT/1205** ⊕

**9**  
⊕  ⊕  
POWER 100-120V 220-240V

**8**  **10** 

AC 100-120V ~ 60Hz FUSE: T8.0AL 250Vac **500W**  
AC 220-240V ~ 50Hz FUSE: T8.0AL 250Vac



**ATTENTION**  
RISQUE D'ELECTROCUTION  
NE PAS OUVRIR

**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



## Connecting Up

Always switch off your system before disconnecting any wires.

To simplify and to increase the versatility and of connecting, the SerieHT models have two low-level RCA inputs. This is to facilitate ability use with both AV surround sound systems, two-channel stereo systems and powered speakers.

### Low-Level Inputs

#### .1/LFE Input

There is a single RCA jack labeled .1/LFE for LFE connection to a processor. Plug one end of the RCA to RCA cable into the .1/LFE jack of the REL and the other end into the SUB OUT Jack of your processor.

The dual RCA jacks can be used for stereo low-level connection to the output a stereo processor source or powered speakers. When using stereo inputs, plug one end of the RCA to RCA cables into both of the LOW LEVEL INPUT jacks of the REL and the other end into the left and right channel output of your preamplifier.

The upper frequency amplification of these inputs can be limited using the CROSSOVER control. This CROSSOVER control is labeled LFE at its maximum set point which indicates this should be the setting when the source itself is frequency limited such as a SUB OUT connection from a processor.

### Phase Switch

The phase control on a REL has two positions, 0 and 180. One of these positions will set the REL in phase with the speakers, and one will set it out of phase. The labels 0 and 180 are just labels and tell us nothing about the rest of the system, only if the REL is working with the speakers or not. Whichever position results in the loudest and fullest sub bass, is the correct position.

We want the REL to work in harmony with the speakers, reinforcing bass, not cancelling it. In other words, we want the drivers in the speakers and the REL to move forward at the same time and move backward at the same time. When this happens, it results in an increase in sub bass volume and the pressurization in the room and they are in phase. The opposite is if the speakers and REL are working against each other causing cancelation of low bass. We call this out of phase.

## REL Set-Up Made Simple

With the REL SerieHT, there are two basic ways to connect and setup. The first is a single channel input from the sub out of a theater or power speaker system. In this case a single RCA cable is need and the CROSSIVER control can be set to LFE since the source will have an internal upper frequency limit. The second is a stereo input from a stereo preamp or powered speaker system. Here there will be the need for two RCA cables and the user can set the upper frequency limit using the CROSSOVER control.

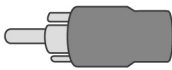
### Connecting and Setting Up

Place in desired position. While your REL has been designed to be extremely easy to position and achieve excellent results, careful placement along the same wall as the screen will yield improvements. Listen for increases in deep bass output as well as precision of bass notes when setting up.

### Theater connection (Sub Out connecton)

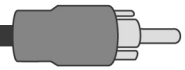
Connect RCA cable from Sub Out of theater processor to LFE input of SerieHT.

**.1/LFE Input**



**Phono Interconnect**

**Preamp Output or Sub/LFE Output**



- Adjust LEVEL control to 10 o'clock.
- Adjust CROSSOVER control to LFE (maximum).
- Plug in AC cord.
- Power on with switch next to AC input.
- Set toggle below STATUS light to ON.
- Fine tune LEVEL control using a known powerful .1 chapter to make sure your setting is not too high or damage can occur.
- Set CROSSOVER control lower to eliminate upper bass boom.

### Stereo connection (Powered Speaker connection)

Connect RCA from output to right input for mono or both left and right for stereo.



- Adjust LEVEL control to 10 o'clock.
- Adjust CROSSOVER control to 10 o'clock.
- Plug in AC cord.
- Power on with switch next to AC input.
- Set toggle below STATUS light to ON.
- Fine tune LEVEL control to blend with powered speakers.
- Fine tune CROSSOVER control to blend.

**Note:** *The relationship between the CROSSOVER and LEVEL will become inverse, meaning that small increases in CROSSOVER may require similar decreases in LEVEL.*

**Note:** *Place carefully, While your REL has been designed to be extremely easy to position and achieve excellent results, careful placement along the same wall as the screen will yield improvements. Listen for increases in deep bass output as well as precision of bass notes when setting up.*

### Phase Orientation

Once connected, we need to adjust for phase. This may be the single most critical step, and because it really is quite simple, it is often over-thought. Keep in mind; the right phase is whichever position is the loudest or fullest. While playing music with true low bass, adjust the crossover to a point where the REL and the speaker are sure to share frequencies at 50Hz on the crossover control, or slightly higher for smaller speakers. At this point turn the HI/LO LEVEL control up so that both the REL and speaker are roughly equal in volume and then switch, using the phase switch, from "0" to "180" phase positions. Again, whichever position is loudest or fullest is the correct position. That is, when the position is working in harmony with your main speakers, reinforcing bass, not canceling it.



**Crossover and Level Settings:**

To determine the crossover point, take the volume of the REL (using the Level control) all the way down, and put the crossover to 10 o'clock. At this point, bring the REL's volume back up slowly to the point where you have achieved a subtle balance, i.e. the point at which you can just hear the SerieHT even with the main speakers playing. First, bring the crossover point up until it is obviously too high; now gently reduce frequency to the appropriate setting. For all intents and purposes, this is the correct crossover point. Once this stage has been reached, subtle changes to volume and crossover may be accomplished to provide the last bit of complete and seamless integration. With that, set-up is complete.

***Hint:** There may be a tendency to set the crossover point too high and the volume of the Sub-Bass System too low when first learning how to integrate a REL with the system, the fear being one of overwhelming the main speakers with bass. In making this common error, the resulting set-up will be lacking in bass depth and dynamics. The proper crossover point and volume setting will increase overall dynamics, allow for extended bass frequencies, and improve soundstage properties. Note, volume adjustments may need to be made to offset the effects of crossover changes. In general, when selecting a lower crossover point, more volume may need to be applied. Higher crossover frequencies will generally necessitate less gain.*

**Running In**

Care taken during run in will be rewarded by many years of pleasurable use. Both the electronics and the drive unit will benefit from an initial period of carefully controlled use. Possible damage may be sustained by running in the unit at too high a volume setting over an extended period. On the other hand, by taking a little care over this initial period, about 24 hours of actual use, a longer life with a higher potential eventual performance is assured.

**Care and Polishing**

The cabinets are best maintained by using only a damp cloth on the vinyl. For the top insert, please use automobile polish made by reputable manufacturers. Our favorites are those made by Meguiars and Mother's. Be careful not to get any polish in the gaps or on the vinyl as it will be hard to clean out. If objects are to be placed upon the top, it is advisable to use a small mat to protect the surface and to avoid the risk of rattles.

## Technical

The SerieHT employs an advanced filter circuit which provides exceptional performance when coupled to the rest of the signal chain of the Sub-Bass System.

The amplifier is inherently stable and will retain its characteristics over very long periods of time – important in a unit designed for an exceptionally long working life. These amplifiers are designed to withstand reasonable abuse and overloads. If in doubt, please contact your dealer.

We believe that the importance of the electronics, cabinet and drivers being designed to work in harmony is paramount. This belief allows SerieHT to achieve the highest possible level of fidelity.

### **Overload Protection**

All REL Sub-Bass Systems are designed as true sub bass speakers. They are designed to reproduce those exceptionally deep notes that are felt as well as heard. This it will attempt to do at whatever volume level you set. If set too high no damage should result because the built-in electronics will limit the cone movement. This electronic control is called Set-Safe™. It constantly and instantaneously monitors the output from the power amplifier and is totally transparent in operation until required. This means it has absolutely no effect on the sound quality of your REL until an overload is detected.

Ordinarily an overload would cause the power amplifier to go into clipping with resultant loss of control over the drive unit. This can cause drive unit damage, and always sounds nasty. Set-Safe™ detects the point of incipient clipping and gently soft-clips the waveform of the signal to ensure actual clipping does not occur.

This is a necessarily simplified description of what actually happens, but in effect, Set-Safe™ controls the amplifier and ensures there is minimum risk of amplifier and driver damage caused by over-driving.

A thermal overload device is fitted to all SerieHT Sub-Bass Systems. If the unit is deliberately over-driven this device will sense the temperature rise and cut the output; recovery time is approximately five minutes. If this happens, it is a warning that the unit is being over-driven and the volume level control should be reduced to a safe level.

Although everything possible has been done to minimize risk of thermal overload failure, there can be no defense against those individuals who deliberately abuse the device. Such damage is NOT covered by warranty. Please remember your REL is there to supplement your main system, not overwhelm it!

### Power Saving Efficiency

All REL sub bass system designs utilize a true Power On-Off switch that affords the owner the ability to turn off their unit completely, without having to unplug the A/C mains cord. When a REL sub bass system is switched off using the Power On-Off switch on the rear panel it draws ZERO power.

In addition to the power switch there is an OFF/ON/AUTO mode switch has three positions. Far left is OFF, middle is ALWAYS ON and far right is AUTO.

The SerieHT features an AUTO standby mode that is enabled when the power mode switch on the rear of the unit is set to the "AUTO" position. In this mode, the input signal is constantly monitored for audio activity. If not audio information is detected over a period of 30 minutes, the unit will enter a low power standby mode in which less power is consumed. When input signal activity is detected, the unit resumes normal operation. By using the standby mode, you can ensure that there is no unnecessary power draw when the unit is not in use.

**Note:** *Due to variations in program material, it is impossible to produce a perfectly reliable standby circuit. Bass rich music or effects will consistently trigger our standby circuit whilst content that is low in volume and possesses little or no bass cannot be relied upon to trip the standby function.*

Alternatively, the user has the option to leave the unit in the normal operation mode at all times by selecting the "ON" position of the power mode switch. Leaving a REL on, produces the best sonic performance and the most reliable operation. In this mode, the unit will not enter standby regardless of whether or not there is activity at the input. Using this setting ensures that the SerieHT is ready to react instantaneously to bass transients, whether in music or films.

Model	Power Draw at Standby	Power Draw at Idle
HT/1205	> 0.5 Watts	12 Watts
HT/1003	> 0.5 Watts	10 Watts

## HT/1205 Specifications

<b>Type:</b>	Closed box, front firing woofer
<b>Drive Unit:</b>	12 in., Glass fiber reinforced cone with inverted dust cap
<b>In Room</b>	
<b>Lower Frequency Response:</b>	-6dB at 22Hz
<b>Input Connectors:</b>	Low Level stereo RCA, LFE RCA
<b>Output Connectors:</b>	Low Level stereo RCA, LFE RCA
<b>Gain Control Range:</b>	95 dB
<b>Power Output:</b>	500 watts (RMS)
<b>Phase Switch:</b>	Yes, 0 or 180 degrees
<b>Amplifier Type:</b>	Class D
<b>Fully Electronic with SET-SAFE:</b>	Yes
<b>DC Fault:</b>	Yes
<b>Output Short:</b>	Yes
<b>Mains Input Voltage:</b>	220-240 volts, 110-120 volts for certain markets
<b>Fuses:</b>	8 Amp semi delay 230 volts operation 8 Amp semi delay 115 volts operation
<b>Dimensions</b>	
<b>W x H x D, Inc. Feet:</b>	Including feet and rear panel controls 15 x 16 x 15.7 in., (376 x 405 x 399 mm)
<b>Net Weight:</b>	42.3 lbs. (19.2 kg)
<b>Finish:</b>	Vinyl
<b>Supplied Accessories</b>	
<b>Mains Lead:</b>	Yes
<b>Users Setup guide:</b>	Yes

## HT/1003 Specifications

<b>Type:</b>	Closed box, front firing woofer
<b>Drive Unit:</b>	10 in., Glass fiber reinforced cone with inverted dust cap
<b>In Room</b>	
<b>Lower Frequency Response:</b>	-6dB at 24Hz
<b>Input Connectors:</b>	Low Level stereo RCA, LFE RCA
<b>Output Connectors:</b>	Low Level stereo RCA, LFE RCA
<b>Gain Control Range:</b>	91 dB
<b>Power Output:</b>	300 watts (RMS)
<b>Phase Switch:</b>	Yes, 0 or 180 degrees
<b>Amplifier Type:</b>	Class D
<b>Fully Electronic with SET-SAFE:</b>	Yes
<b>DC Fault:</b>	Yes
<b>Output Short:</b>	Yes
<b>Mains Input Voltage:</b>	220-240 volts, 110-120 volts for certain markets
<b>Fuses:</b>	6.3 Amp semi delay 230 volts operation 6.3 Amp semi delay 115 volts operation
<b>Dimensions</b>	
<b>W x H x D, Inc. Feet:</b>	Including feet and rear panel controls 12.5 x 13.7 x 13.8 in., (318 x 347 x 351 mm)
<b>Net Weight:</b>	33.3 lbs. (15.1 kg)
<b>Finish:</b>	Vinyl
<b>Supplied Accessories</b>	
<b>Mains Lead:</b>	Yes
<b>Users Setup guide:</b>	Yes



*In the interest of product development, REL Acoustics Limited reserve the right to vary these specifications without notice*



**REL Acoustics Limited**

North Road, Bridgend industrial Estate . Bridgend, CF31 3TP . United Kingdom

Telephone: +44 (0)1 656 768 777 . Fax: +44 (0) 1 656 766 093

Web: [www.rel.net](http://www.rel.net)