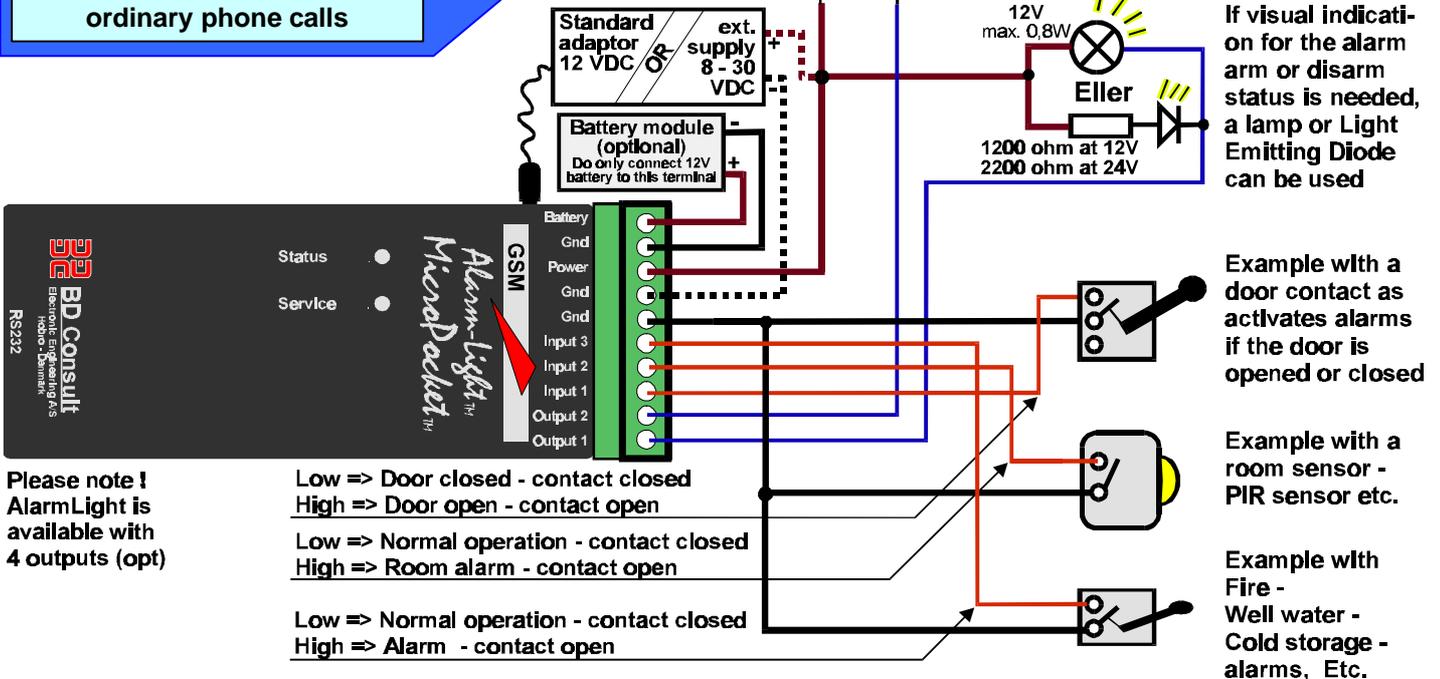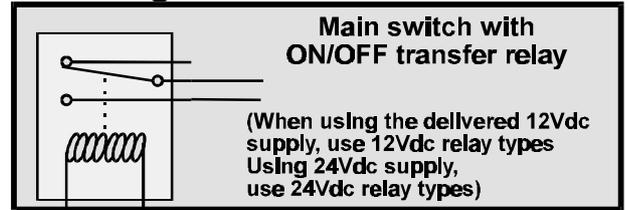## Example with:
# REMOTE HEATING CONTROL
## IN SUMMER HOUSE/RESIDENCE
### Combined with burglar alarm system

Switch on the heating in your summerhouse, using an SMS or making an ordinary phone call

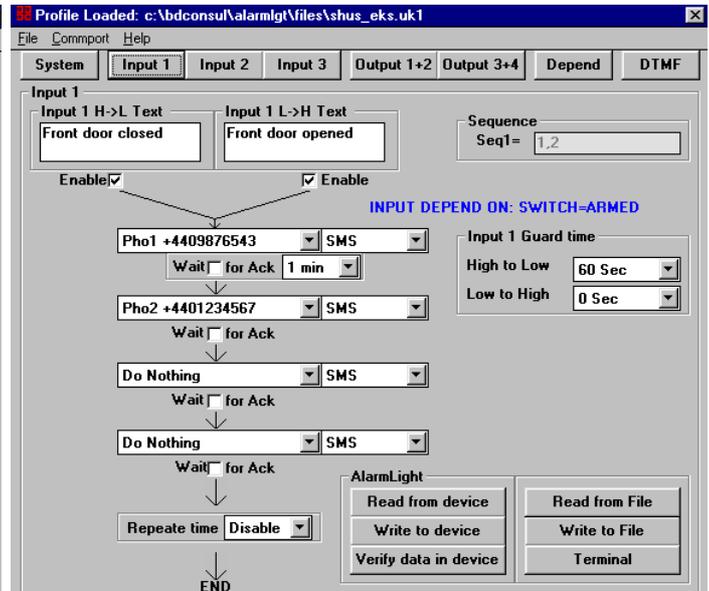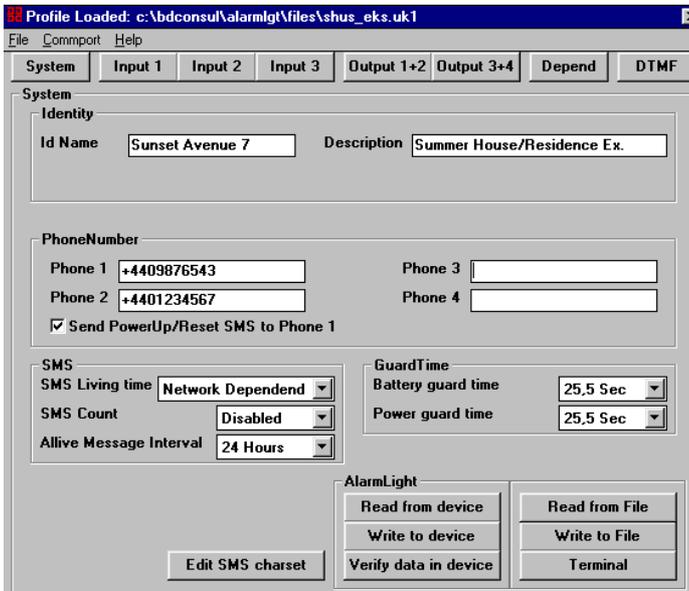Receive alarms as SMS, or as ordinary phone calls

## Heating control

**Main switch with ON/OFF transfer relay**

(When using the delivered 12Vdc supply, use 12Vdc relay types
Using 24Vdc supply, use 24Vdc relay types)

Standard adaptor 12 VDC — OR — ext. supply 8 - 30 VDC

Battery module (optional)
Do only connect 12V battery to this terminal

12V max. 0,8W
Eller
1200 ohm at 12V
2200 ohm at 24V

If visual indication for the alarm arm or disarm status is needed, a lamp or Light Emitting Diode can be used

**BD Consult** Electronic Engineering A/S Hobro - Denmark RS232

Alarm-Light MicroPacket ™

GSM

Status
Service

Battery
Gnd
Power
Gnd
Gnd
Input 3
Input 2
Input 1
Output 2
Output 1

Example with a door contact as activates alarms if the door is opened or closed

Example with a room sensor - PIR sensor etc.

Example with Fire - Well water - Cold storage - alarms, Etc.

Please note !
AlarmLight is available with 4 outputs (opt)

Low => Door closed - contact closed
High => Door open - contact open

Low => Normal operation - contact closed
High => Room alarm - contact open

Low => Normal operation - contact closed
High => Alarm - contact open

---

## Programming suggestion:

### With 2 alarm receivers, and with remote control via SMS or ordinary phone calls.

Profile Loaded: c:\bdconsul\alarmlgt\files\shus_eks.uk1
File  Commport  Help

System | Input 1 | Input 2 | Input 3 | Output 1+2 | Output 3+4 | Depend | DTMF

**System**
**Identity**
Id Name: Sunset Avenue 7    Description: Summer House/Residence Ex.

**PhoneNumber**
Phone 1  +4409876543        Phone 3
Phone 2  +4401234567        Phone 4
☑ Send PowerUp/Reset SMS to Phone 1

**SMS**
SMS Living time: Network Dependend
SMS Count: Disabled
Allive Message Interval: 24 Hours

**GuardTime**
Battery guard time: 25,5 Sec
Power guard time: 25,5 Sec

**AlarmLight**
Read from device | Read from File
Write to device | Write to File
Verify data in device | Terminal
Edit SMS charset

---

Profile Loaded: c:\bdconsul\alarmlgt\files\shus_eks.uk1
File  Commport  Help

System | Input 1 | Input 2 | Input 3 | Output 1+2 | Output 3+4 | Depend | DTMF

**Input 1**
Input 1 H->L Text: Front door closed
Input 1 L->H Text: Front door opened
Sequence Seq1= 1,2

Enable ☑     ☑ Enable

INPUT DEPEND ON: SWITCH=ARMED

Pho1 +4409876543  SMS
Wait ☐ for Ack  1 min
Pho2 +4401234567  SMS
Wait ☐ for Ack
Do Nothing  SMS
Wait ☐ for Ack
Do Nothing  SMS
Wait ☐ for Ack

**Input 1 Guard time**
High to Low: 60 Sec
Low to High: 0 Sec

Repeate time  Disable

**AlarmLight**
Read from device | Read from File
Write to device | Write to File
Verify data in device | Terminal

END

---

> All messages have the ID: Sunset Avenue 7
> Alarm receivers are: mobile Phone 1 and Phone 2
> Initial Power-on message is send to Phone 1 as SMS at start-up.
> SMS living time is based on the GSM network. Can be set down to 5 minutes.
> No SMS send counter activated. Used for prepaid SIM cards to send SMS counter alarm at maximum decided SMS count.
> I'm alive message will be send every 24 hours. Can be disabled or set to another value.
> When battery powered, a power failure message will be send when the main have been lost for 25 sec. and battery low message when the battery capacity has been below 15% continuously for 25 sec.

> INPUT 1 is only active if the internal "ARM SWITCH" is armed.
> If Input 1 change from low to high (open switch), the SMS message "Front door opened" is without delay send to Phone 1 and Phone 2.
> If Input 1 change to Low (switch closed) and stays low continuously for 60 sec. the SMS message "Front door closed" will be send to Phone 1 and Phone 2
> There are no wait for acknowledge from mobile Phone 1 (dummy or empty SMS reply) before the same alarm is send to mobile Phone 2.
> If the alarm stays active (door opened), the alarm is not repeated with fixed "Repeat time" intervals.

## Input 2

| Input 2 H->L Text | Input 2 L->H Text | Sequence |
|---|---|---|
| -Normal operation, no PIR detection | Room ALARM from input 2 detector | Seq2= `1,2` |

Enable ☐     ☑ Enable

**INPUT DEPEND ON: SWITCH=ARMED**

| Pho1 +4409876543 ▼ | SMS ▼ | Input 2 Guard time |
|---|---|---|
| Wait ☐ for Ack `1 min` ▼ | | High to Low `60 Sec` ▼ |
| Pho2 +4401234567 ▼ | SMS ▼ | Low to High `0 Sec` ▼ |
| Wait ☐ for Ack | | |
| Do Nothing ▼ | SMS ▼ | |
| Wait ☐ for Ack | | |
| Do Nothing ▼ | SMS ▼ | |
| Wait ☐ for Ack | | |
| Repeate time `Disable` ▼ | | |

**AlarmLight**

| Read from device | Read from File |
|---|---|
| Write to device | Write to File |
| Verify data in device | Terminal |

> INPUT 2 is only active if the internal "ARM SWITCH" is armed.
> If Input 2 is activated (open switch), the SMS message "Room ALARM from input 2 detector" is without delay sent to Phone 1 and Phone 2.
> No SMS message will be send when Input 2 change to Low (switch closed) and stays low continuously for 60 sec., but input 2 will hereafter be ready to send new alarms if Input 2 again is activated.
> There are no wait for acknowledge from mobile Phone 1 (dummy or empty SMS reply) before the same alarm is send to mobile Phone 2.
> If the alarm stays active (room sensor active), the alarm is not repeated with fixed "Repeat time" intervals.

## Input 3

| Input 3 H->L Text | Input 3 L->H Text | Sequence |
|---|---|---|
| Fire,Well water,Cold storage normal | Fire,Well water,Cold storage alarm | Seq3= `1VS,2VS` |

Enable ☑     ☑ Enable

| Pho1 +4409876543 ▼ | SMS+VOICE ▼ | Input 3 Guard time |
|---|---|---|
| Wait ☐ for Ack `1 min` ▼ | | High to Low `60 Sec` ▼ |
| Pho2 +4401234567 ▼ | SMS+VOICE ▼ | Low to High `0 Sec` ▼ |
| Wait ☐ for Ack | | |
| Do Nothing ▼ | SMS ▼ | |
| Wait ☐ for Ack | | |
| Do Nothing ▼ | SMS ▼ | |
| Wait ☐ for Ack | | |
| Repeate time `Disable` ▼ | | |

**AlarmLight**

| Read from device | Read from File |
|---|---|
| Write to device | Write to File |
| Verify data in device | Terminal |

> INPUT 3 is always active and not dependent on the "ARM SWITCH".
> If Input 3 is activated, the SMS message "Fire,Well water,Cold storage alarm" is without delay sent to Phone 1 and Phone 2.
> If Input 3 has been deactivated (low) continuously for 60 sec. the SMS message " Fire,Well water,Cold storage normal" will be send to Phone 1 and Phone 2
> Phone 1 and Phone 2 will beside the SMS alarm receive an ordinary phone call. When taking the phone, alarm tones will be announced as attention for that you have received an alarm via SMS
> The call should not be acknowledged with # -"Wait f ack." is not active.

## Output 1 + 2

### Output 1 Commands

**Activate Output (Set low)**
Command: `01=1`
Alternative: ` `

**Deactivate Output (Set high)**
Command: `01=0`
Alternative: ` `

**Flash Output (Active 1 sec.)**
Command: `01`
Alternative: ` `

**Output 1 Initial settings**
○ Activate (Set low)
● Deactivate (Set high)
○ Flash Output (Active 1 sec)

### Output 2 Commands

**Activate Output (Set low)**
Command: `02=1`
Alternative: `WARM`

**Deactivate Output (Set high)**
Command: `02=0`
Alternative: `COLD`

**Flash Output (Active 1 sec.)**
Command: `02`
Alternative: ` `

**Output 2 Initial settings**
○ Activate (Set low)
● Deactivate (Set high)
○ Flash Output (Active 1 sec)

> At initial start-up, output 1 and output 2 will be deactivated (connected relays to the outputs will not be activated).
> If an SMS with the text "WARM" is send to the AlarmLight, output 2 will be activated since the alternative command to activate output 2 is user programmed to be the command "WARM".
> If an SMS with the text "COLD" is send to the AlarmLight, output 2 will be deactivated since the alternative command to deactivate output 2 is user programmed to be the command "COLD".

## Output 3+4

### Output 3 Commands

**Activate Output (Set low)**
Command: `03=1`
Alternative: ` `

**Deactivate Output (Set high)**
Command: `03=0`
Alternative: ` `

**Flash Output (Active 1 sec.)**
Command: `03`
Alternative: `START`

**Output 3 Initial settings**
○ Activate (Set low)
● Deactivate (Set high)
○ Flash Output (Active 1 sec)

### Output 4 Commands

**Activate Output (Set low)**
Command: `04=1`
Alternative: ` `

**Deactivate Output (Set high)**
Command: `04=0`
Alternative: ` `

**Flash Output (Active 1 sec.)**
Command: `04`
Alternative: `STOP`

**Output 4 Initial settings**
○ Activate (Set low)
○ Deactivate (Set high)
● Flash Output (Active 1 sec)

> At initial start-up, output 3 will be deactivated and output 4 will be activated for 1 second.
> If an SMS with the text "START" is send to the AlarmLight, output 3 will shortly be activated for 1 sec. since the alternative Flash command for output 3 is user programmed to the command "START".
> If an SMS with the text "STOP" is sent to the AlarmLight, output 4 will shortly be activated for 1 sec. (Alt. Flash cmd for output 4 is "STOP"). Output 3 and 4 is optional!

## Input Dependency

| | |
|---|---|
| Input 1 depends on: | `SWITCH=ARMED` ▼ |
| Input 2 depends on: | `SWITCH=ARMED` ▼ |
| Input 3 depends on: | `NOT DEPENDED` ▼ |

**Arm / Disarm Commands**

Set internal switch (ARM)
Command: `ARM`
Alternative: `ON`

Clear internal switch (DISARM)
Command: `DISARM`
Alternative: `OFF`

**DTMF Function 0**
`*` = ARM    `#` = Disarm

**SMS Text when Armed**
`Burglar alarm ARMED`
☑ Send SMS back

**SMS Text when Disarmed**
`Burglar alarm DISARMED`
☑ Send SMS back

☑ Route internal ARM status to output 1

ARM= `19,19,00`
ARMB= `91`

**AlarmLight**

| Read from device | Read from File |
|---|---|
| Write to device | Write to File |
| Verify data in device | Terminal |

> Input 1 and 2 are made dependent on the internal status named ARM SWITCH, used to ARM or DISARM the inputs as are dependent.
> Input 3 is not made dependent on other signals, and is always ready.
> The ARM Switch status can be activated with the SMS text "ON", as this text is user programmed as the alternative ARM command.
> In the same way, the ARM switch can be deactivated sending the SMS message "OFF" to AlarmLight, as "OFF" is alternative command.
> When the ARM SWITCH changes status, an SMS is replied indicating the new status: "Burglar alarm ARMED" or "DISARMED".
> For this example the ARM Switch status is routed to output 1, enabling a visual indication for the ARM status using a lamp or a LED.
> Making an ordinary phone call to AlarmLight, the ARM status can be Armed or Disarmed via function 0, using the keypad * and #.

## DTMF Control

☎ ☑ Enable DTMF Control

**Access**
☐ Restricted Access (Known numbers)
PinCode `1234` ☑ Enable Pin

| DTMF Function 1 | DTMF Function 2 | DTMF Function 3 | DTMF Function 4 |
|---|---|---|---|
| `*` Output 2 = 1 ▼ | `*` Flash Outp.3 ▼ | `*` No Function ▼ | `*` No Function ▼ |
| `#` Output 2 = 0 ▼ | `#` Flash Outp.4 ▼ | `#` No Function ▼ | `#` No Function ▼ |
| Responce: | Responce: | Responce: | Responce: |
| Output 2 ▼ | Input 3 ▼ | No Function ▼ | No Function ▼ |
| F1= `05,06,02` | F2= `07,10,07` | F3= `00,00,00` | F4= `00,00,00` |

**AlarmLight**

| Read from device | Read from File |
|---|---|
| | |

> AlarmLight will answer normal phone calls, as the Enable DTMF Control" is activated.
> For this example, calls to AlarmLight will be answered regardless of the caller is known or not by the AlarmLight, but requires the caller to type in a 4 digit pin code, here 1234.
> When the Pin code is accepted, function 1 is automatically entered. If function 1 is active then a high frequency response tone will be heard, otherwise a low frequency tone will be announced. The tone response is for this example programmed to be output 2 status (Heating control).
> In general for all functions then typing * result in an activation for the function, and # result in a deactivation. Function 1 is programmed to activated output 2 when a * is typed in, and to deactivate output 2 when a # is typed in from a pushbutton phone.
> You can at anytime choose another function by typing in the wanted function number. Remember that the ARM Switch has function 0.