MICRO THERMO TECHNOLOGIES™

MT Alliance – MT-Alarm Installation Guide

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Table of Contents

1 Preface

1.1 Using this manual

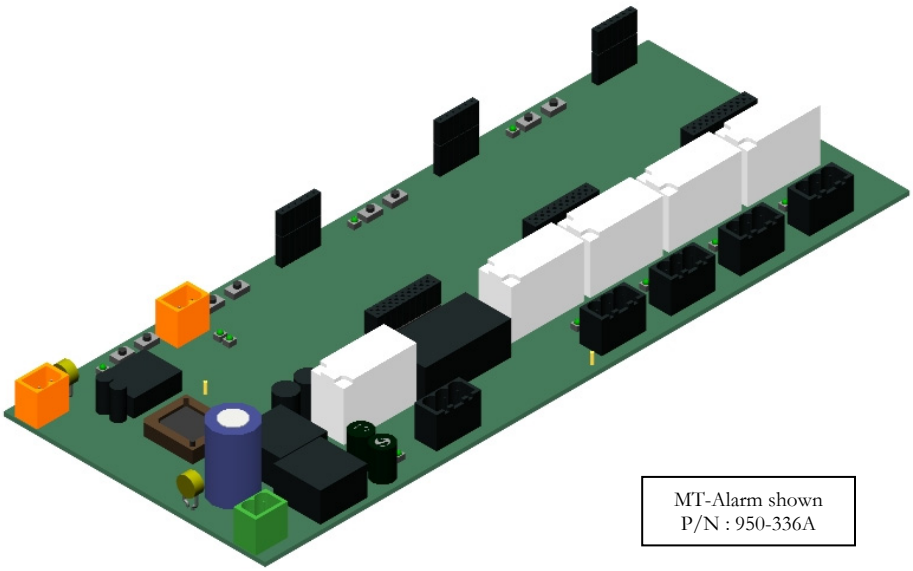
This manual is intended for a technician installing the MT-Alarm, the RTC and Scheduler node in the MT Alliance system. It requires a basic knowledge on how to use and configure the MT Alliance system. For full details the technician should refer to ***MT Alliance User's Manual*** (PUID 75-MTA-1005) the ***MT Alliance - Node Installation Manual*** (PUID 71-MTA-1006) and ***MT Alliance Basic Installation Manual*** (PUID 71-MTA-1020).

The MT-Alarm node MTT P/N 9XX-336X is a new card used for sending the alarm signal through **Alarm Relays** which were formerly known as **Actuators**. The MT-Alarm is supported as a **Controller Node** since ver 3.0 of MT Alliance but it was renamed the **Alarm Relay Node** in ver 4.0. The previous firmware is not compatible with the new hardware for direct replacement. Nevertheless the old hardware is still supported by this MT Alliance version. If you are upgrading the hardware from the RTC MT-334X and MT-2338 cards you will be prompt to choose between the old and the new firmware model.

1.2 Conventions used in this manual

For your convenience, several screen captures have been added to describe the procedures. Some images contain text balloons to illustrate the procedure.

You will also come across certain terms in bold to better understand the text. When you see an X in a part number it can be replaced with any character. For example if you see MT-336X it mean that all items having a part number starting with MT-336 are applicable.



MT-Alarm shown
P/N : 950-336A

2 MT-Alarm Node Description

The MT-Alarm node has 5 functions.

1. **An alarm board with 4 alarm relays.**
2. **A PC watchdog with one watchdog relay.**

The MT-Alarm node also serves as a base for three of the following optional plug-in control module:

3. **One Real Time Clock node (RTC) comes standard on a 961-336B**
4. **One or more HVAC Scheduler**
5. **One or more Lighting Scheduler**

The main purpose of the "**MT-Alarm node**" is to activate a relay when an "alarm message" is received from an "alarm source" in the system. When the "alarm source" is acknowledged, it sends a "return to normal" message to the "**MT-Alarm node**" which deactivates the relay. Each relay action can be optionally inverted.

3 Physical Installation

3.1 Power

The MT-Alarm node requires 16VAC to 24VAC. One side of a 32V centre tap (CT) transformer can be use to supply 16VAC. **The MT-Alarm node must not be powered with the full 32VAC.** The MT-Alarm board with 3 control modules 950-3968 will require 10VA.

There are leds indicator for the 12V and the 5V. The 12V is used for the relays. The 5V powers the on-board microprocessor as well as the plug-in modules. A 5V fault on the MT-Alarm board affects all the plug-in modules.

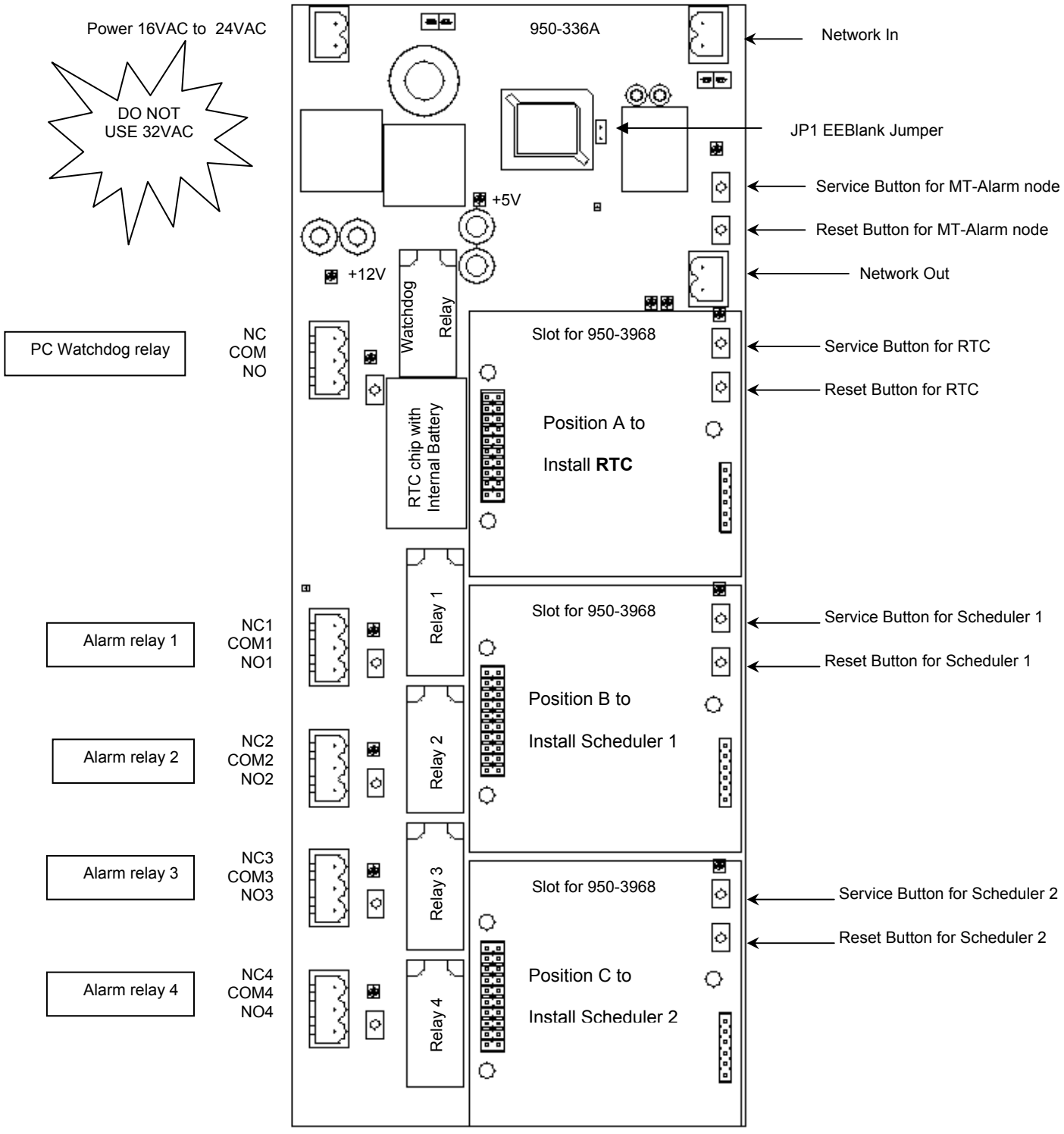
3.2 Network

There are two data connectors. On a BUS topology you must bring the data into the board with one connector and exit from the other.

3.3 EE Blank

There is a built-in **EEBlank**. Should the MT-Alarm node be corrupted during the software download, and require "blanking", short JP1 and press the **Reset** button. You should see the service led blink rapidly for a few seconds. Keep the short on JP1 until the service led stop blinking. Remove the short and reset the board again. Retry the node installation and normal operation should be reestablished. An **EEBlank** done on a MT-Alarm does not affect any plug-in modules. If an EEBlank is required on a plug-in module it can be perform only on those who are specially equipped with this feature.

3.4 Layout diagram



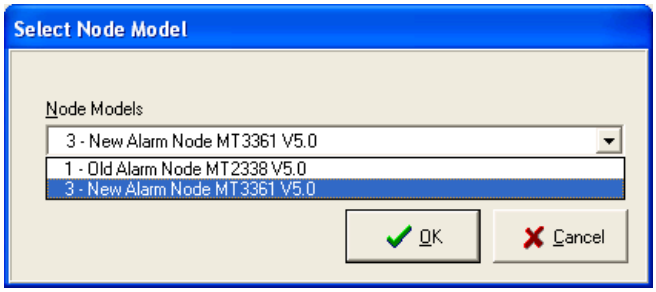
4 MT Alliance Installation

The MT-Alarm node and the RTC Node should be the two first nodes of a site to be dropped in a view. It avoids long waiting for the application to make connection to all other node. However they don't need to be installed (physically) at this time.

Here is how to configure the MT-Alarm in the MT Alliance application. Make sure that the MT-Alarm is power and connected to the network. Select **Configuration** Mode.

4.1 Upgrading from old node model

If you are upgrading the hardware from the MT-2338 and MT-334X cards you can click on **Replace** on the **Commands/Status** tab of the node information window. For the MT-Alarm and the RTC you will be prompt to select from a list of a two firmware models.

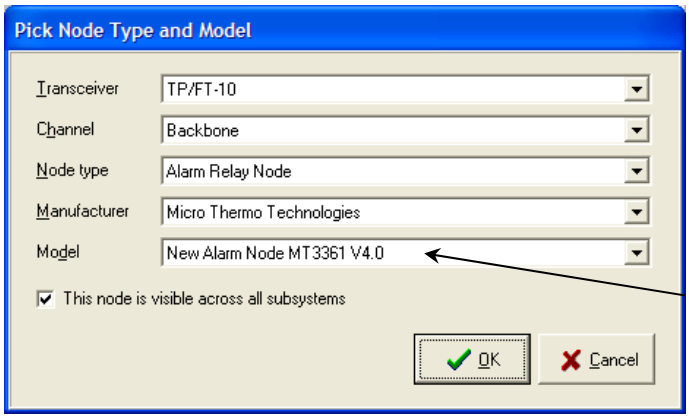


Select the NEW one and click OK then follow the instructions.

If you are upgrading a Scheduler MT-334X for an MT-3968 the same firmware is good for both models so no selection is provided.

4.2 Dropping the MT-Alarm node

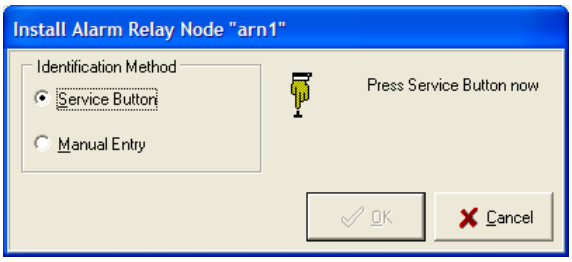
Select the desired view for the MT-Alarm node. Pick and drop a Node from the component tool box then make the following selections:



Make sure to choose the new software

The Alarm board contains 4 service buttons, 4 reset buttons and 4 service leds. They are distinguished by the suffix (A, B and C or none for the base). Each of the 4 sections has to be installed separately as though they were individual nodes.

Click on the MT-Alarm node icon **arn1** and on the **Commands/Status** tab then on **Install**. Make sure to press the appropriate service with no suffix button.

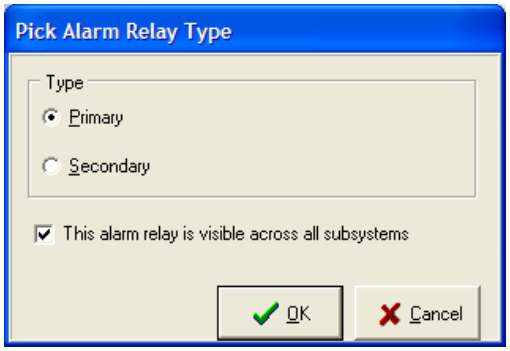


4.3 Dropping an Alarm Relay

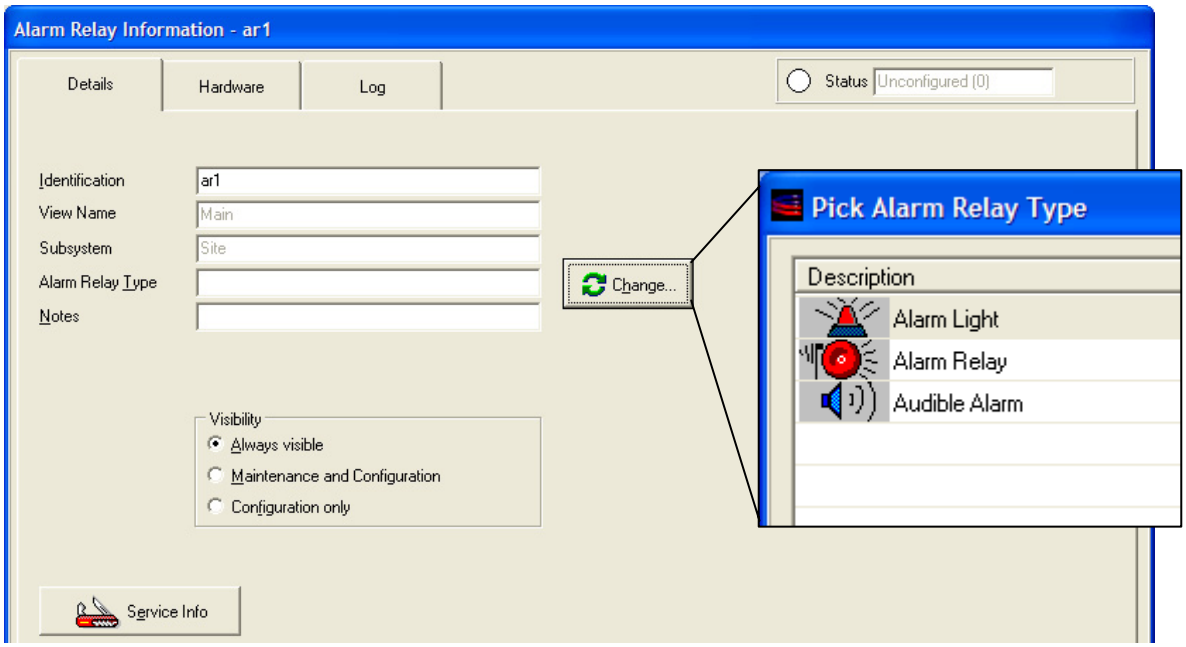
When dropping an **alarm relay**, make the following selections:

Select **Primary Type**

And check "**This alarm relay is visible across all subsystems**"



Click on the Alarm Relay icon and on the **Details** tab



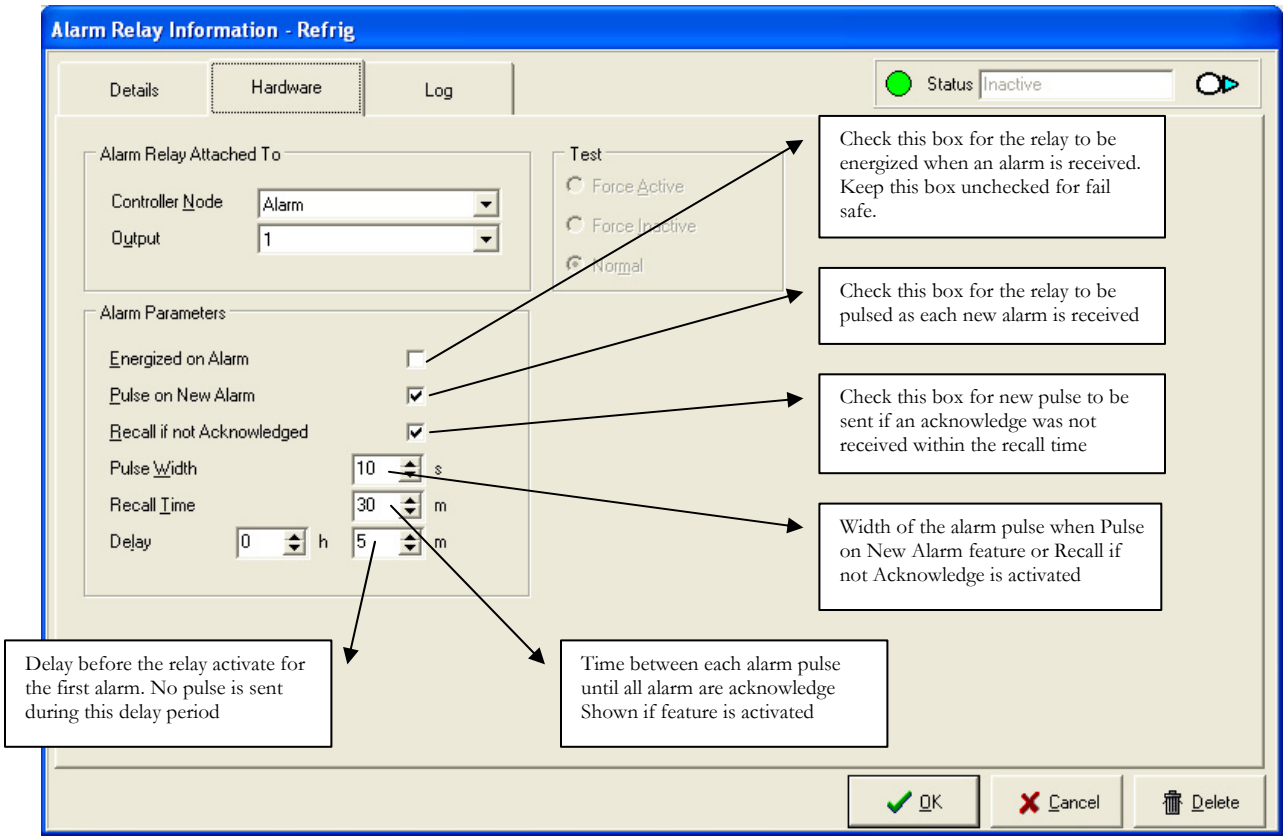
You can change the **Identification** for a more explicit name like "Refrig" or "LowTemp"

You can change the icon picture when you click on the **Change** button

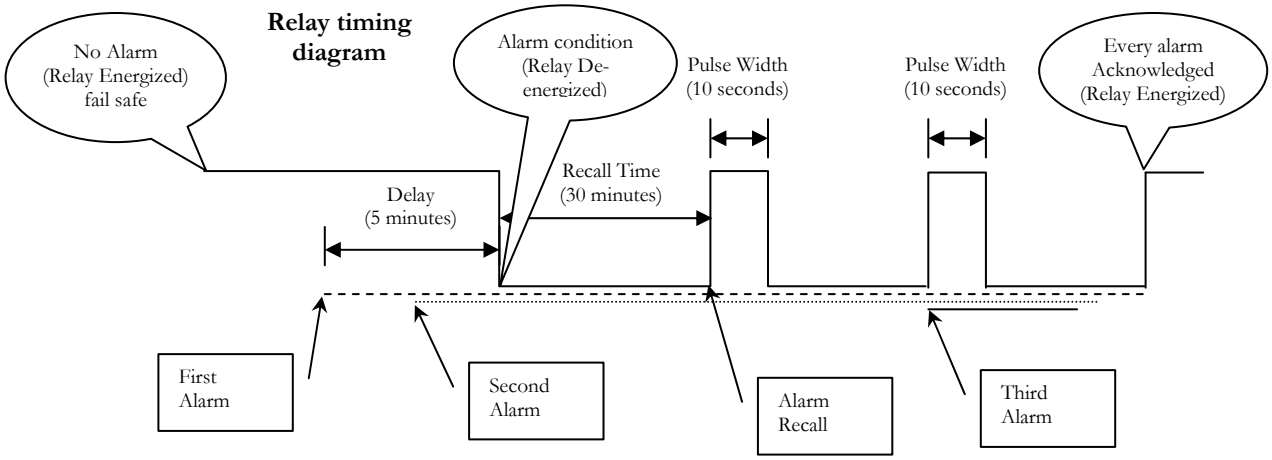
Click on the **Hardware** tab to continue

Each Alarm relay has his individual property so they can be set differently.

Select the MT-Alarm node (normally **arn1**) and output on which you wish to attach the alarm relay. Then select the desired alarm parameters.

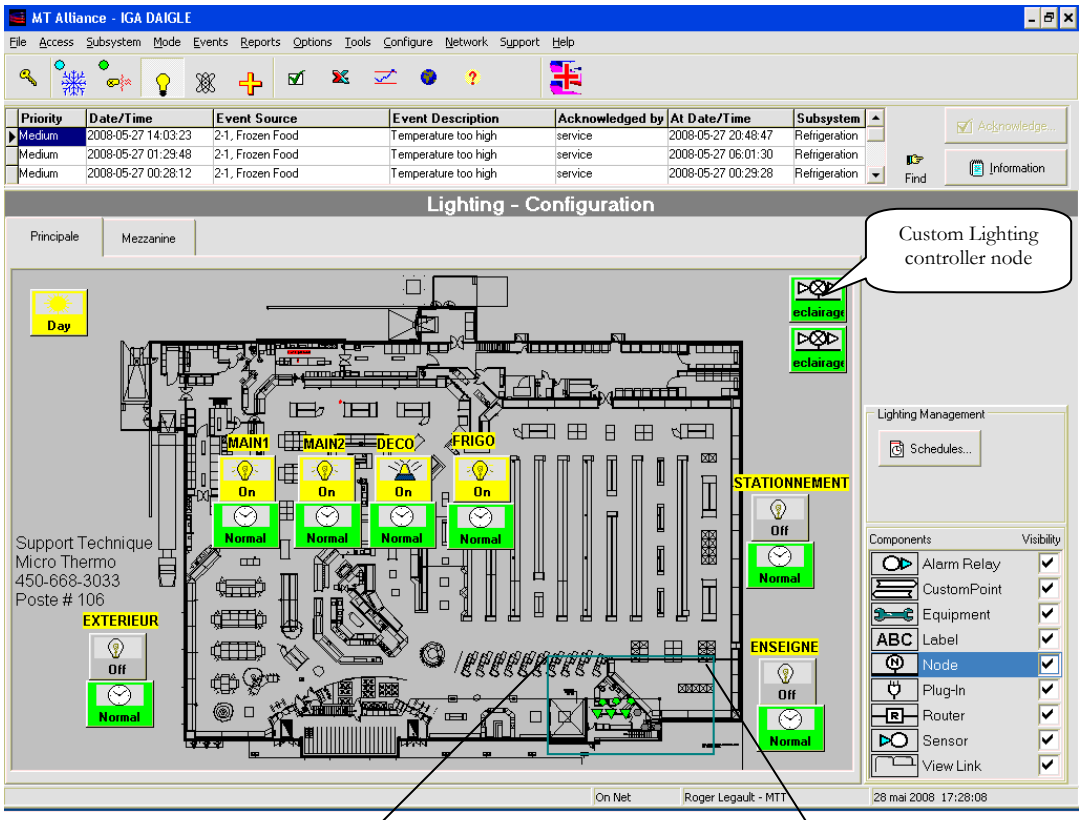


Example of **Delayed Alarm**, **Recall** and **Pulse on New Alarm** Feature
With these feature checked, each recall and new alarm are signaled by energizing the alarm relay for a period equivalent to the pulse width field (10 seconds in our example). At the end of this pulse, the alarm relay is de-energized. This example assumes that the relay is de-energized on alarm.

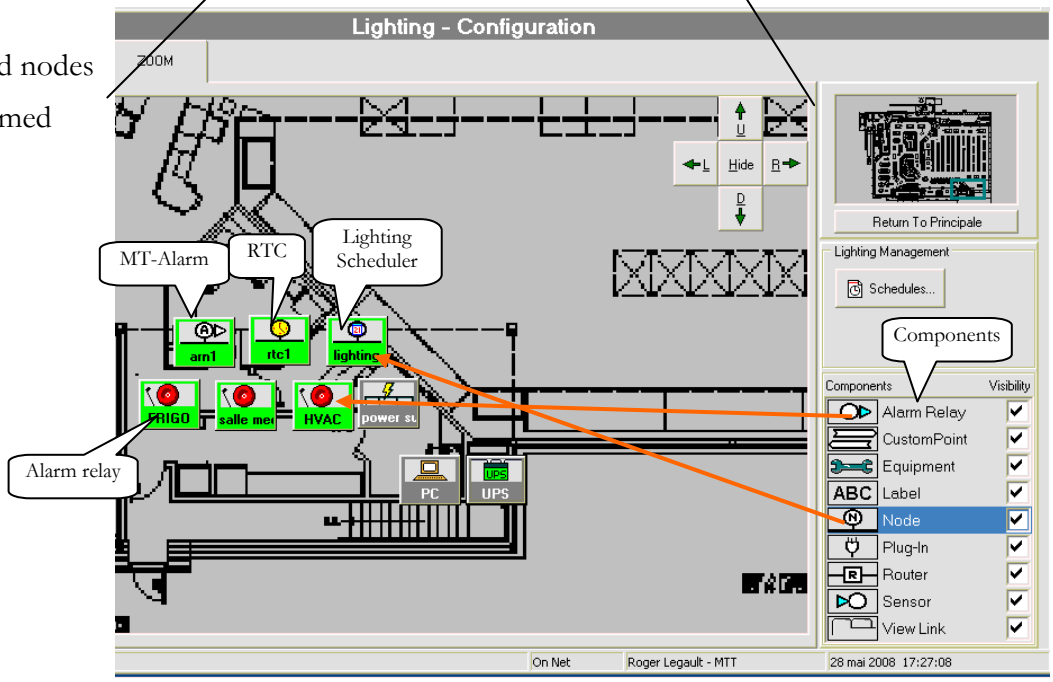


5 Dropping Control Module

Use this layout as an example: Main view in the lighting subsystem

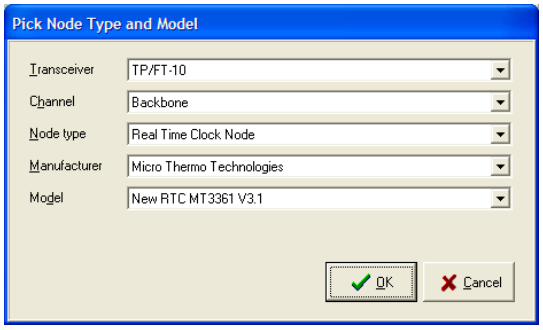


Dropped nodes in a zoomed view



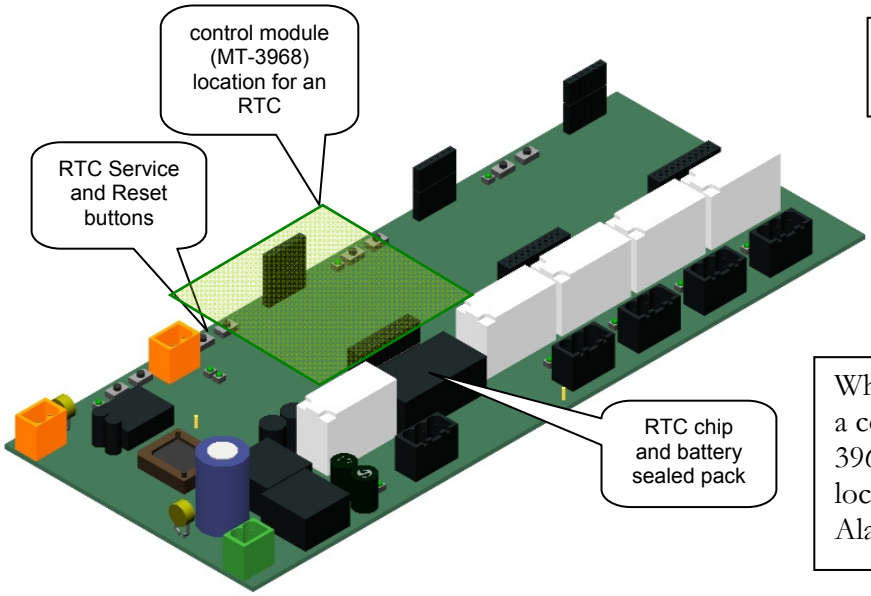
5.1 Real Time Clock node (RTC)

As it was recommended for the MT-Alarm node, the RTC node should be one of the two first nodes to be dropped in a site. It avoids long waiting for the connection to all other node to be completed. However it doesn't need to be installed at this time.



Pick and drop a **Node** from the component tool box on the main view of the site then make the following selections:

When installing the RTC, make sure to press the ServiceA button. Refer to section 3 for the diagram. The expected battery life is 10 years. The RTC chip and battery comes in a sealed replaceable package. The battery alone can not be changed.



Order P/N : 961-336B for MT-Alarm with RTC on snaptrack

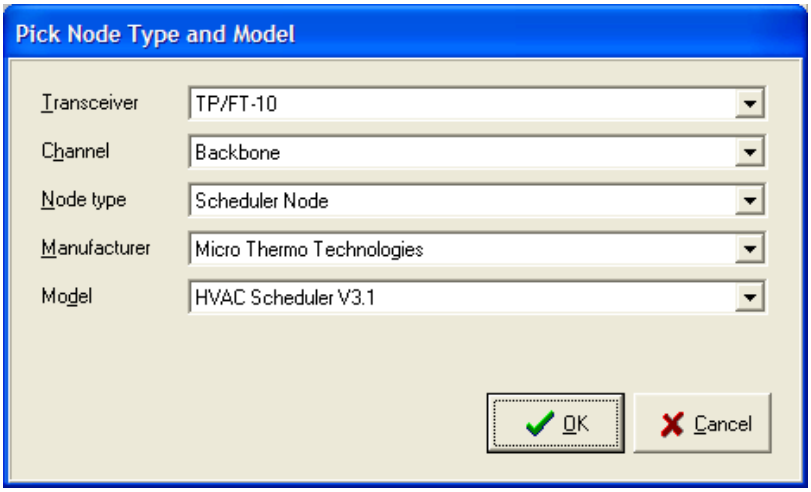
When a RTC is required, a control module (MT-3968) must be present in location A of the MT-Alarm node.

Note: This firmware is not compatible with the Old MT3341 RTC node. The old firmware may be necessary when upgrading the Alliance software while keeping the same old hardware on a site. Should you use the wrong software/hardware combination, the *Battery Needs Service* message will appear shortly after the node comes on line. To correct the situation click on **Replace** on the **Commands/Status** tab of the RTC node information window. You will be prompt to select from a list of a two firmware models, select the appropriate model and click OK.

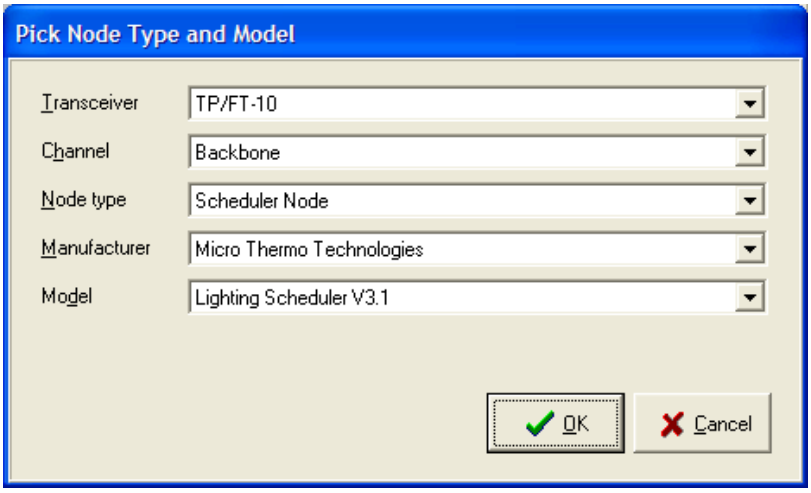
5.2 Scheduler node

Up to 2 **scheduler nodes** may be installed on the MT-Alarm node. To do so install a control module (MT-3968) in location B or C. Any combination of **HVAC** or **lighting scheduler** may be used. When installing the **Scheduler**, make sure to press the respective **Service** button. Refer to section 3 for the diagram.

The HVAC Scheduler can be dropped only on a view in the HVAC subsystem



The Lighting Scheduler can be dropped only on a view in the Lighting subsystem



If you need more Scheduler you can use a Neuron Board MT-331A, a MT-334F or another MT-Alarm card with up to 3 control modules MT-3968 on it. An MT-Alarm card with three control modules on it can be used as four extra Schedulers.

6 Revision History

REV	Description	Révisé Par	Date
1.0	English Document Creation	JR	30-Oct-01
2.0	English Update for MTA V3.0	RL	04-Dec-03
3.0	English Update for MTA V4.0	RL	26-Feb-04
3.1	English Update for MTA V4.0	RL	28-Apr-04
3.2	English Update for MTA V4.1 template 71-GEN-0008	RL	30-Apr-04
3.3	Header and footer modifications + Ready for revision	RL, JG	11-May-04
3.4	Publication of a temporary version	CP	01-Nov-06
4.A	Revision for french translation	RL	17-May-08
4.0	Final revision and publication for MTA V4.1	RL	29-May-08
4.1	Logo and address changed	RL	14-Dec-11
4.2	Cover page and formatting	ER	30-Mar-2015