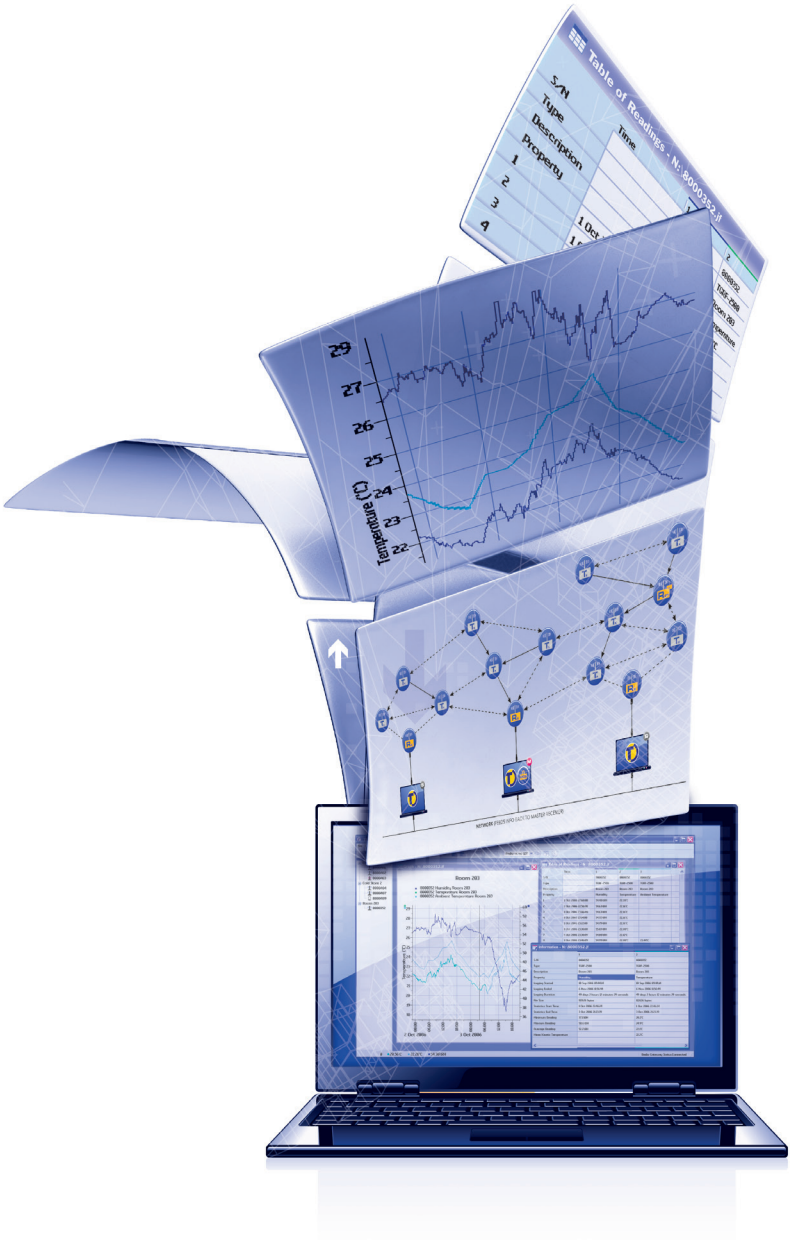
Tinytag **Radio**

Quick Start Guide



Tinytag

Gemini
DATA LOGGERS

ABOUT THIS GUIDE

This guide explains how to set up a Tinytag Radio System. Installation of the software is covered first, followed by information on how to effectively deploy the loggers. Included in the appendices are the system requirements and a troubleshooting guide.

Further information can be found in the Tinytag Radio Technical Manual, which has been shipped with your radio system or can be found at **www.tinytag.info/support**

Once Tinytag Explorer has been installed, you can also find further information in the software's help file by going to **Help** and **Contents**.

WHAT YOU NEED

To use a Tinytag Radio system, you will require the following items:

- The SWCD-0080 Tinytag Explorer CD (Radio version)
- A Tinytag Explorer Radio activation code
- A Tinytag Radio receiver
- A Radio receiver interface cable
- A Radio receiver power supply (Ultra Radio)
- One or more radio data loggers (with probes as appropriate)

If any of the above are missing, please contact your Tinytag supplier.

- You will also require a computer (it is strongly recommended that this should be left running continuously).

The activation code for Tinytag Explorer can be found on the back of the Tinytag Explorer CD case. It is a set of 20 characters split up into 5 blocks of 4.

If you have lost or misplaced your radio activation code, please contact your supplier.

INSTALLING A RADIO SYSTEM

This section describes how to install a Tinytag Radio System.

The steps are:

- Installing Tinytag Explorer
- Radio Receiver Setup
- Data Logger Setup

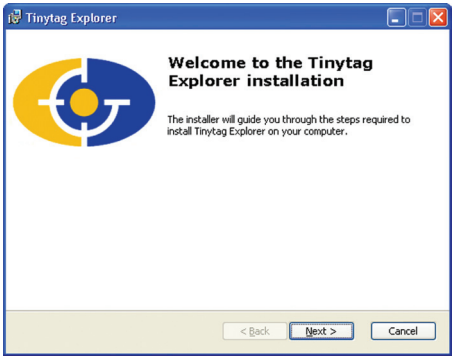
The instructions below take you through this process and recommend best practice to get a radio system up and running as quickly as possible.

INSTALLING TINYTAG EXPLORER

To install Tinytag Explorer, you will need to have Windows Administrator Access rights on the PC you are using.

- Place the Tinytag Explorer CD into the CD drive of your PC.

The Tinytag Explorer Installer will run automatically after a few seconds and present you with a Welcome screen. If Tinytag Explorer Installer does not run automatically, open Windows Explorer, navigate to your CD drive and double-click **tinytag.msi**.



- Click **Next** to start the installation.
- Review the software's licence agreement and if you accept the terms click **I accept the terms in the Licence Agreement**, then **Next**.
- You will then be asked where you want to install the software (we recommend you use the default installation path) and whether you would like a shortcut for the software to be created on your desktop. Once you have made your choices, click **Next**, then **Install**.
- The software will then install automatically (you may be prompted by Windows to confirm your agreement to the installation). When you see the Installation Complete screen, click **Finish**.
- Once the installation is complete, you will be asked to restart your computer. Click **Yes** to do this.

For information on System Requirements refer to the APPENDIX at the end of this document.

Starting Tinytag Explorer

To start Tinytag Explorer, click on the desktop icon for the software:

If you didn't create a desktop icon when installing the software, you can start the software by going to:

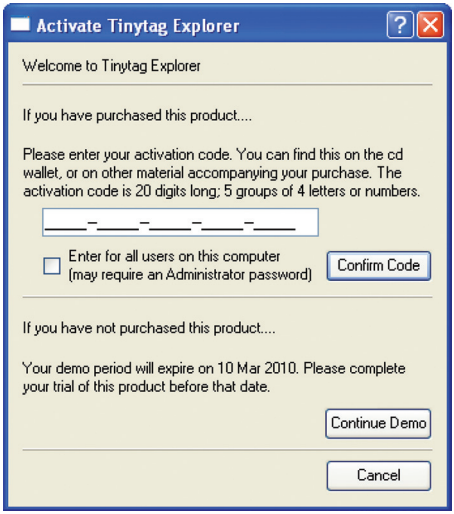
Start >> All Programs >> Tinytag Explorer 4.X >> Tinytag Explorer

Activating Tinytag Explorer

The first time you run Tinytag Explorer you will be prompted to activate the software.

Enter the activation code into the box provided and choose whether you want it to be applied to all the user accounts on the computer.

Next click **Confirm Code** and you will see a message to confirm that the code has been accepted.



The activation code for Tinytag Explorer can be found on the back of the Tinytag Explorer CD case. It is a set of 20 characters split up into 5 blocks of 4. If you have lost or misplaced your radio activation code, please contact your supplier.

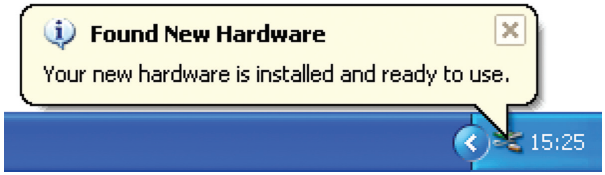
You may need Windows Administrator access rights to activate the software for all user accounts. If you do not have Administrator access rights, leave the box unchecked and the software will only be enabled for the current user account.

Hardware Setup

Plug the radio receiver cable into a USB port on your computer.

You will see a **Found New Hardware** message next to the clock.

When the installation is complete, the message will change to tell you it is ready to use.



Next, plug the cable into the radio receiver (and the power supply, if using Ultra Radio) and turn the receiver on.

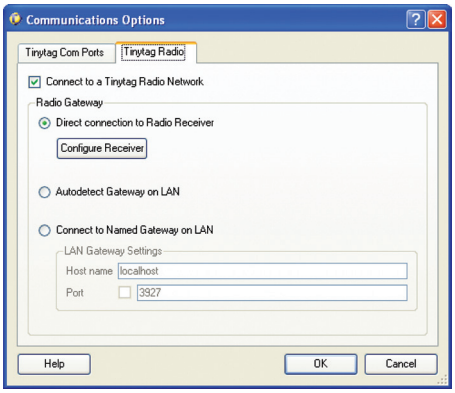
The receiver should then be located so that it is within range of one or more data loggers (an elevated position may help).

Software Setup

Configuring a Receiver

With the receiver plugged into the computer, start Tinytag Explorer and go to **Options** and **Communication Options.**

In the Communication Options, click on the **Tinytag Radio** tab and select **Connect to a Tinytag Radio Network**, then **Direct connection to Radio Receiver** and click on the **Configure Receiver** button.

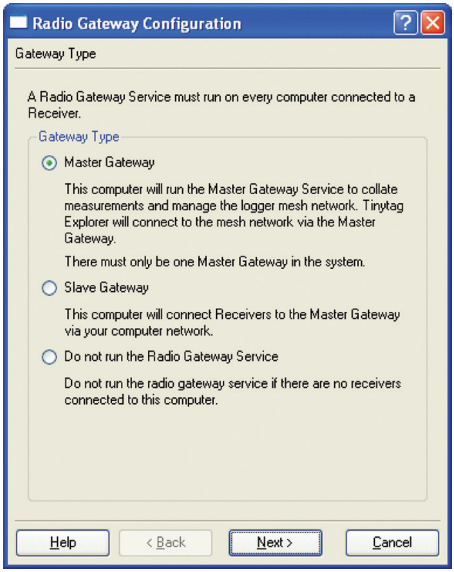


Master Gateway Configuration

Gateway Type

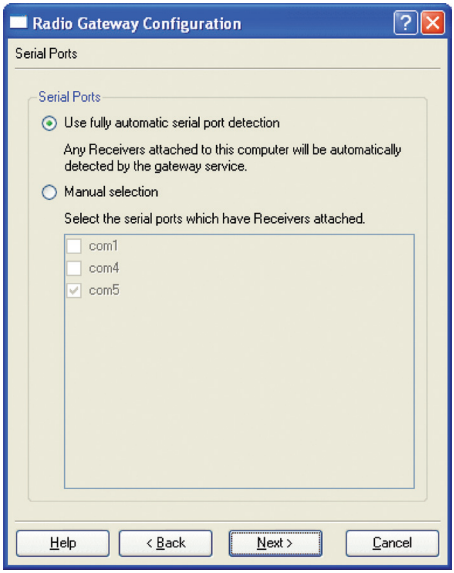
If you are installing a new radio system select **Master Gateway**, then **Next**.

If you are adding an additional receiver to a new computer on an existing installation, see the Slave Gateway Configuration section of the Tinytag Explorer software's help file.



Serial Port Set Up

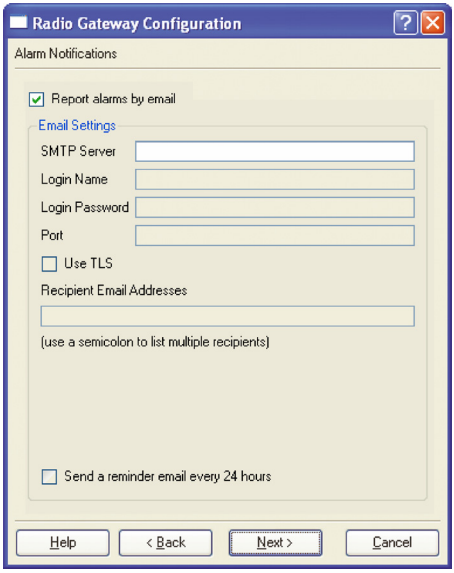
Choose the **Use fully automatic serial port detection** option (recommended) or select a serial port manually from the list, then click **Next**.



E-Mail Alarm Notifications

Tinytag Explorer can be set to send e-mail warnings when radio logger alarm limits are exceeded (the user account that the radio system is working on must have a properly configured e-mail account for this to work).

To set the address e-mails are sent to, click the **Report alarms by email** box and then enter the SMTP address for your e-mail server and the recipient's e-mail address.



You can enter multiple e-mail addresses by separating them with a semi-colon.

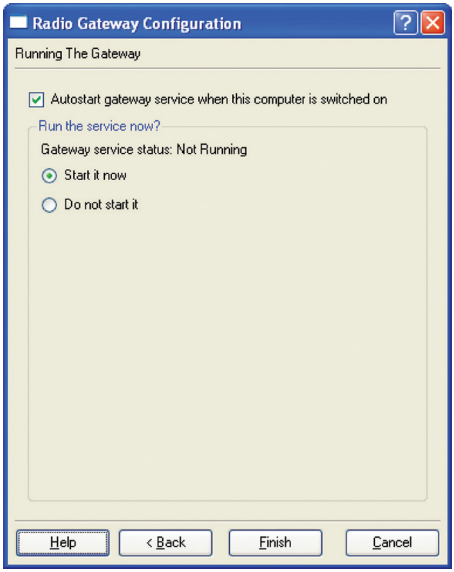
You can set the system to send automatic e-mail reminders every 24 hours by checking the Send a reminder email every 24 hours box.

Click **Next**.

Running the Gateway

To start the Radio Gateway Service running, every time the computer is started (recommended), check **the Autostart gateway service when this computer is switched on** box. This will automatically start the gateway service running, and maintain the radio network, in the event of an unexpected reboot.

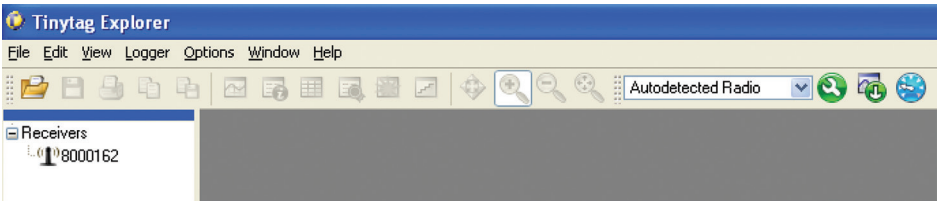
To start the radio service, check the **Start it now** box, then **Finish**.



Enabling the Radio Navigation Panel

On the Tinytag Explorer toolbar you will now see a new drop-down menu. Select the **Autodetected Radio** option.

The radio navigation panel will then appear on the left-hand side of your screen and after a few moments the receiver will be listed.

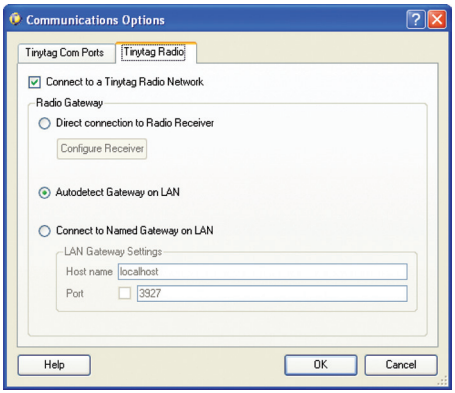


Connecting to a Radio System Remotely

If the computer you have installed the receiver on is connected to a LAN, you can view data and configure the system remotely.

To connect to an existing radio system, install Tinytag Explorer on your computer, then go to **Options** and **Communication Options**. Select the **Tinytag Radio** tab, **Connect to a Tinytag Radio Network** and then **Autodetect Gateway on LAN**.

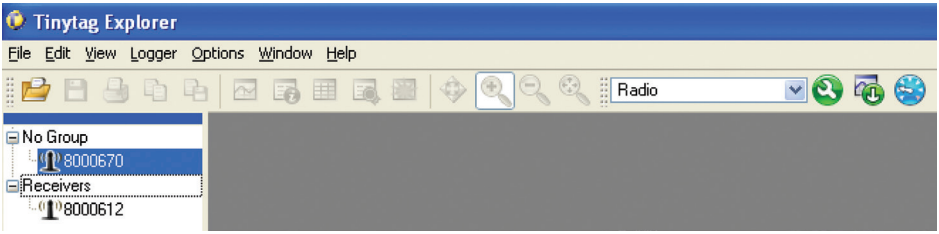
If you know the address of the computer the system is running on, select the **Connect to Named Gateway on LAN** option and enter the **Host name** and **Port**.



Once Tinytag Explorer has been installed and the radio receiver set up, the data loggers can be turned on.

To minimise the time necessary for the units to connect, start turning on the loggers closest to the receiver first and then work outwards.

To turn a logger on, press and hold the switch on the unit until you see its LED light green. The LED on the unit will then flash red until the logger has found its place in the mesh network, at which point it will then start to flash green.



In most cases loggers will find their place in the network and be listed in the radio navigation pane in Tinytag Explorer within a few minutes, but depending on the size and complexity of the network, it may take a little time for all loggers to be listed.

Be patient whilst the meshing process is taking place.

If a logger doesn't show up after a few minutes, the system should be left to configure itself; moving or resetting loggers during the initial meshing will slow the process. For some large or complex installations it may be necessary to wait an hour or more for the initial connection of loggers to the system.

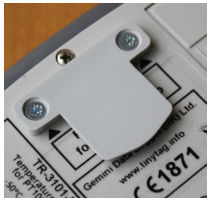
The LED on a radio logger will flash red if the unit has not found its place in the network, if an alarm is active or if the unit's battery is low.

If the receiver does not catch this first transmission, for whatever reason, the logger will start connecting on the next logging interval (by default, this is set at 10 minutes).

Ultra Radio Mounting Bracket

If wall mounting an Ultra Radio data logger, remove the two indicated screws from the rear of the logger and use them to screw the mounting clip onto the back of the logger.

The bracket to hold the logger on a wall has two 3mm diameter holes, 32mm apart.



USING A RADIO DEVICE

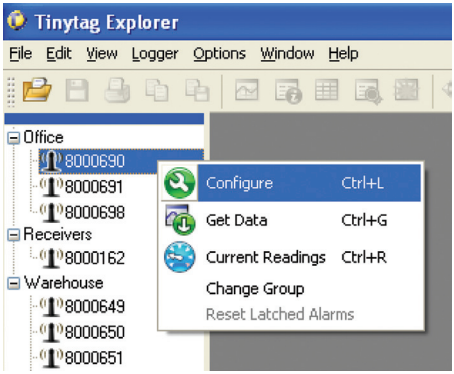
To work with a radio logger or receiver, right click on it and select an option from the menu that appears.

Configure: Use this to change a radio devices settings

Get Data: Use this to view data from a radio device

Current Readings: Use this to view what a device is currently reading.

Further information on these and other options can be found in the Tinytag Explorer Help file by going to Help and Contents.



APPENDIX 1 - SYSTEM REQUIREMENTS

Radio Gateway Service

The requirements for running the Radio Gateway Service on a computer are shown below. Note that additional requirements apply if you are running Tinytag Explorer on the same computer.

Operating System:	Windows Vista, 7, 8, 8.1 & 10 (x86 & x64 versions)
Processor:	200MHz Pentium III processor or better
Memory:	512Mb
Hard Disk Space:	At least 30Mb available
Monitor for installation:	Minimum 256 colours, resolution 800 x 600

The requirements for running the Radio Gateway Service on an existing server are shown below.

CPU time:	Negligible
Memory:	20Mb
Hard Disk Space:	Typically 10Mb for programs, 5Mb for data.

Tinytag Explorer

Operating System:	Windows Vista, 7, 8, 8.1 & 10 (x86 & x64 versions)
Browser:	Internet Explorer 8 (or above), Firefox or Google Chrome
Processor:	200MHz Pentium III processor or better (1.6GHz recommended).
Memory:	512Mb (1024Mb recommended for Vista).
Hard Disk Space:	At least 30 Mb available hard disk space (120Mb recommended
Monitor:	Minimum 256 colours, resolution 800 x 600 or greater recommended.

APPENDIX 2 - BUTTONS AND LIGHTS

Tinytag Radio devices have an LED indicator that shows the current status of the unit:

Action	LED	Status/Operation
n/a	No Indicators	Device is powered off
n/a	Red flashing every 4 seconds	The device is powered on and has a problem. Either: a) Battery is Low. b) Device has not yet established its place in the mesh network. c) An alarm indicator is signalled. Check the nature of the problem using Tinytag Explorer.
n/a	Green flash every 4 seconds	The device is powered on, and does not have any problems.
Press and briefly hold the on/off switch.	Green indicator shows for one second. It then briefly flashes green then red.	The device has been switched on.
Press and hold the on/off switch for 3 seconds.	Red indicator shows for one second.	The device has been switched off.

APPENDIX 3 - TROUBLESHOOTING

Tinytag Explorer Status Bar Indicator Flashes Red

The connection between Tinytag Explorer and the Radio Gateway Service has been broken. Click on the Status Bar and press the **Connect** button. This may be either a computer network connection or a software connection within the same computer.

If it cannot connect, then the Radio Gateway Service has a problem. If the Gateway Service is running on a different computer then maybe that computer is turned off. If it is running on the same computer then maybe the service has not started.

Note that this indicator shows **Connected** as soon as Tinytag Explorer has connected to the Radio Gateway Service. This does not indicate that the Gateway Service has connected to its receiver (via USB) or any loggers (via radio).

Firewall Configuration

Tinytag Explorer needs to be able to communicate with the Radio Gateway Server. They connect using TCP and UDP which allows them to run on different computers.

This connection will be under the control of any firewall running on these computers.

The Tinytag Explorer installer automatically configures the windows firewall to allow this connection, so most likely no action is necessary.

Any third party firewall will need to be configured to permit the following connections:

UDP port 3927:	For autodetection
TCP port 3927:	For all other communications

FURTHER INFORMATION

For further information on the Tinytag Radio system, please see the Tinytag Radio Technical Manual, which can be found on our web site at

www.tinytag.info/support

For further information on using Tinytag Explorer, please see the help file within the software by going to **Help** and **Contents**.

If you should have any questions that are not covered by the above, please contact your supplier or Gemini Technical Support.

e: help@tinytag.info **t:** +44 (0)1243 813009

NOTES:

NOTES:

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