

# TB8100 Base Station - Advanced Profiles Upgrade

## Introduction

The most flexible base station on the market, the TB8100 gives you more control over your channel configuration with the Advanced Profiles software license.

The Advanced Profiles software upgrade (TBAS020) gives you access to many of the most advanced features of the TB8100 base station:

- Additional Task Manager Tasks
- Channel Profiles
- Signalling Profiles

## Task Manager

A standard TB8100 can have up to 40 enabled tasks for handling alarms, digital inputs and outputs.

The Advanced Profiles software license expands the number of tasks that can be enabled to 200. This is useful when there are many small applications and is essential for any larger application.

The combination of additional tasks and advanced profiles means that Task Manager can dramatically increase configuration flexibility.

## Profiles - Channel Profile

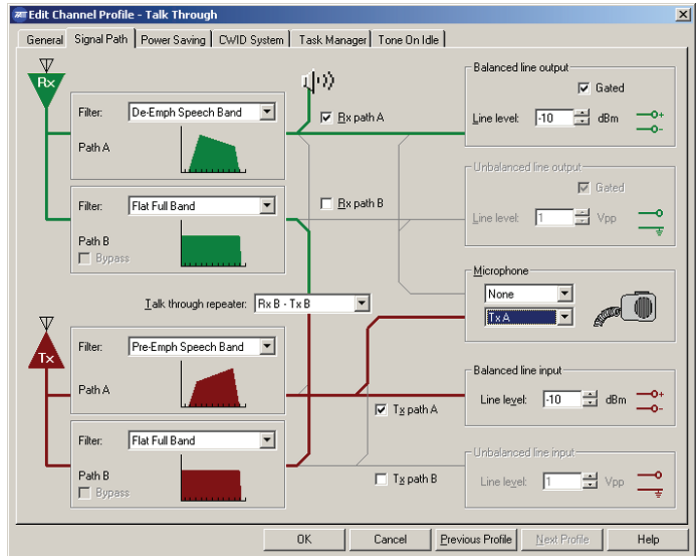
The standard TB8100 base station has one "default" channel profile. An Advanced Profiles upgrade provides 16 channel profiles. Each channel can be assigned a different profile.

Channel profiles are simple to define and change using the Service Kit programming software. It is easy to duplicate channel profiles when adding new base stations to your system.

When upgrading your system, it is possible to save old channel configurations and revert back to saved profiles if required.

## Signal Path

The TB8100 base station has a single "default" signal path profile as standard. The two receiver and two transmitter audio paths use the same filtering characteristics. With the Advanced Profiles license, audio filtering characteristics are independently selectable for both receive and transmit paths.



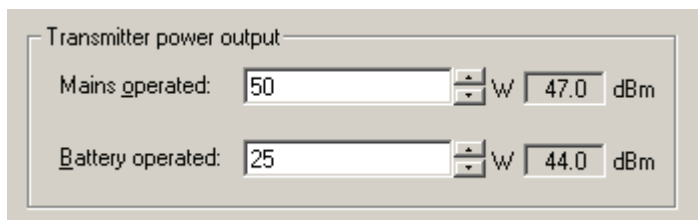
For example, repeated audio can use flat full band audio filters, while the line-in audio is pre-emphasized and the line-out audio is de-emphasized.

This allows immense flexibility, for instance, it is possible to use one audio path for speech and the other for data or subaudible signaling simply by selecting filters to optimize the output for the nature of the traffic.

## Transmitter Power

Power setting is configurable on a per-channel basis on the standard TB8100. Only a single power level can be entered.

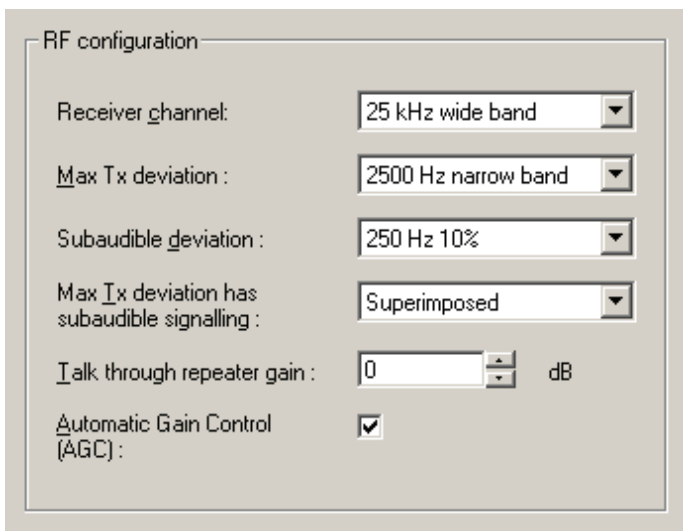
With the Advanced Profiles software license, two transmitter power settings can be defined, based on the power source.



This makes power control far easier for AC/DC systems where batteries can only supply power for a limited time.

## Channel Spacing

The standard TB8100 base station has 12.5kHz, 20kHz and 25kHz channel spacing on a per channel basis. Choosing the channel spacing automatically sets the same receiver and transmitter bandwidth and the transmitter full system deviation.



The screenshot shows the 'RF configuration' window with the following settings:

- Receiver channel: 25 kHz wide band
- Max Tx deviation: 2500 Hz narrow band
- Subaudible deviation: 250 Hz 10%
- Max Tx deviation has subaudible signalling: Superimposed
- Talk through repeater gain: 0 dB
- Automatic Gain Control (AGC):

With Advanced Profiles, there is more flexibility. Independently of the channel spacing setting, the transmitter can be set to full system deviation of 5000Hz, 4000Hz or 2500Hz.

The TB8100 can receive a wide band signal and repeat it as narrowband, useful when a system is being converted from one band to another, resulting in a mix of old and new terminals working the repeater sites.

## Profiles - Signalling Profile

The standard TB8100 has one receive and one transmit tone (CTCSS or DCS).

With the Advanced Profiles software license, up to 16 receive tones can be used, with any combination of CTCSS and DCS, including CTCSS to DCS translation.

A complete 16 tone panel for community repeater applications can be configured using Advanced Profiles.

Most base stations can function only as a repeater or a base station. With an Advanced Profiles software license, the TB8100 can dynamically switch between base station and repeater functions, based on the subaudible code detected.

## Software Licensing

The TB8100 has a range of powerful capabilities, but some of them are only available with a license. Tait's software licensing scheme means that you can select and pay for those features that your network will use.

You can either order a base station with the features you need already licensed, or obtain license keys later on.

A license key is an encrypted code that only works on a single reciter. A key is required for each reciter in the network.