Broadcast

Dynamic RDS OPTION

The WIRED Series of FM Transmitters can al include the Dynamic RDS Option

- Fully dynamic FM broadcast RDS encoder with independent communication port
- Control interface based on ASCII commands and UECP protocol
- Text features include dynamic PS, parsing, scrolling, tagging, fixed messages, scheduling and HTTP reading
- Excellent compatibility with broadcast automation systems
- Control software includes powerful Windows GUI application
- Supports control from external PHP/ASP scripts
- Easy and fast set-up
- Excellent spectral purity, direct digital RDS signal synthesis; compliant with EN 50067 / EN 62106
- Two switchable program sets (with optional DSN and PSN setting)
- Internal real-time clock incl. backup battery
- No special 19 kHz input needed - pilot tone internally recovered from MPX signal using digital PLL

RDS services directly supported by the unit

- PI Program Identification
- PS Program Service
- PTY Program Type
- TP Traffic Program
- TA Traffic Announcemen
- AF Alternative Frequencies
- PTYN Program Type Name
- DI Decoder Identification
- EON Enhanced Other Networks information
- RT Radiotext
- RT+ Radiotext Plus
- M/S Music/Speech
- CT Clock-Time and Date
- PIN Program-Item Number
- ECC Extended Country Code
- LIC Language Identification Code
- TMC Traffic Message Channel
- UDG User Defined Groups

DYNAMIC RDS OPTION

User Instruction

PS - Program service name
This is the label of the program service consisting of not more than eight alphanumeric characters, which is displayed by RDS receivers in order to inform the listener what program service is being broadcast by the station to which the receiver is tuned.

RT - Radiotext
This refers to text transmissions, primarily addressed to consumer home receivers, which would be equipped with suitable display facilities. The text can be up to 64 characters long. Some receivers do not support the Radiotext service.
An additional feature of the Radiotext is the Text A/B flag. Two cases occur: If the receiver detects a change in the flag, then the whole radiotext display should be cleared and the newly received radiotext message segments should be written into the display. If the receiver detects no change in the flag, then the received text segments or characters should be written into the existing displayed message and those segments or characters for which no update is received should be left unchanged. For static RT (i.e. RT is not updated and shows only a general information like studio's phone number), the A/B flag has no meaning.

RT+ on iPodClick here for summarization of national character coding issues

RT+ - Radiotext Plus
The RT+ is designed to let the listener take additional benefit from the Radiotext service by enabling receivers to offer direct access to specific elements of Radiotext. Typically the RT+ feature supports song artist and song title elements. These elements anyway carried in the Radiotext, are identified by their class code, length and location within the Radiotext. The receiver must be equipped with the RT+ function (also called "tagging") to take advantage of this feature.

Click here for information about how to send RT+ tagging with our RDS encoders

AF - Alternative frequencies list
The list of alternative frequencies gives information on the various transmitters broadcasting the same program in the same or adjacent reception areas. This facility is particularly useful in the case of car and portable radios.
When the PI code indicates local coverage-area, i.e. only one frequency is used, AF list may contain this frequency.

PI - Program identification
This information consists of a code enabling the receiver to distinguish between countries, areas in which the same program is transmitted, and the identification of the program itself. The code is not intended for direct display and is assigned to each individual radio program, to enable it to be distinguished from all other programs. One important application of this information would be to enable the receiver to search automatically for an alternative frequency in case of bad reception of the program to which the receiver is tuned; the criteria for the change-over to the new frequency would be the presence of a better signal having the same PI code.
The PI code consists of four characters. The first two characters have special meaning, second two are used to clearly identify different stations.
The first character identifies country. The second character identifies program type in terms of area

coverage:
0 - Local (Local program transmitted via a single transmitter only during the whole transmitting time.)
1 - International (The same program is also transmitted in other countries.)
2 - National (The same program is transmitted throughout the country.)
3 - Supra-regional (The same program is transmitted throughout a large part of the country.)
4 to F - Regional (The program is available only in one location or region over one or more frequencies, and there exists no definition of its frontiers.)

ECC - Extended Country Code
It helps the receiver to recognise the country in cooperation with the PI code. The first most significant bits of the PI code carry the RDS country code. The four bit coding structure only permits the definition of 15 different codes, 1 to F (hex). Since there are much more countries to be identified, some countries have to share the same code which does not permit unique identification. The ECC byte determines the country unambigouesly.

Click here to find ECC and first PI digit for your country!

PTY - Program type
This is an identification number to be transmitted with each program item and which is intended to specify the current Program type within 31 possibilities. This code could be used for search tuning. The code will, moreover, enable suitable receivers and recorders to be pre-set to respond only to program items of the desired type. The last number, i.e. 31, is reserved for an alarm identification which is intended to switch on the audio signal when a receiver is operated in a waiting reception mode.

TA - Traffic announcement identification
This is an on/off switching signal to indicate when a traffic announcement is on air. The signal could be used in receivers to:
a) switch automatically from any audio mode to the traffic announcement;
b) switch on the traffic announcement automatically when the receiver is in a waiting reception mode and the audio signal is muted;
c) switch from a program to another one carrying a traffic announcement.
After the end of the traffic announcement the initial operating mode will be restored.

TP - Traffic program identification
This is a flag to indicate that the tuned program carries traffic announcements. The TP flag must only be set on programs which dynamically switch on the TA identification during traffic announcements. The signal shall be taken into account during automatic search tuning, so I recommend to turn this flag on even though you don’t transmit any traffic announcements.

DI - Decoder identification
Indicates which possible operating mode is appropriate for use with the broadcast audio. Many receivers ignore this service completely. For others, only the Stereo and Dynamic PTY flags have a sense. Set the Dynamic PTY if your PTY changes dynamically in dependence on actual program content. Flags Artificial head and Compressed are archaic and should be kept cleared unless you have a real reason for their use.

M/S - Music/speech switch
This is a two-state signal to provide information on whether music or speech is being broadcast. The signal would permit receivers to be equipped with two separate volume controls, one for music

and one for speech, so that the listener could adjust the balance between them to suit his individual listening habits.

CT - Clock-Time and Date
Time and date codes should use Coordinated Universal Time and Modified Julian Day. The listener, however, will not use this information directly and the conversion to local time and date will be made in the receiver's circuitry. CT is used as time stamp by various RDS applications and thus it must be accurate.

EON - Enhanced Other Networks information
This feature can be used to update the information stored in a receiver about program services other than the one received. Alternative frequencies, the PS name, Traffic Program and Traffic Announcement identification as well as Program Type and Program Item Number information can be transmitted for each other service. The relation to the corresponding program is established by means of the relevant Program Identification.

IH - In House Applications
This refers to data to be decoded only by the operator. Some examples noted are identification of transmission origin, remote switching of networks and paging of staff. The applications of coding may be decided by each operator itself.

PIN - Program-Item Number
The code should enable receivers and recorders designed to make use of this feature to respond to the particular program item(s) that the user has preselected. Use is made of the scheduled program time, to which is added the day of the month. The transmitted Program Item Number code will be the scheduled broadcast start time and day of month as published by the broadcaster.

PTYN - Program Type Name
The PTYN feature is used to further describe current PTY. PTYN permits the display of a more specific PTY description that the broadcaster can freely decide (e.g. PTY=4: Sport and PTYN: Football). The PTYN is not intended to change the default eight characters of PTY which will be used during search or wait modes, but only to show in detail the program type once tuned to a program. If the broadcaster is satisfied with a default PTY name, it is not necessary to use additional data capacity for PTYN.

TDC - Transparent Data Channels
The transparent data channels consist of 32 channels which may be used to send any type of data.