



RDS E3 – RDS E5

(Rev. 2.4)

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SAFETY WARNINGS / ISTRUZIONI PER LA SICUREZZA

SAFETY WARNINGS

CONSIGNES DE SÉCURITÉ IMPORTANTES

ISTRUZIONI IMPORTANTI PER LA SICUREZZA

WICHTIGE SICHERHEITSHINWEISE

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

(Rel. 1.6)

PREFACE

**For your own safety and to avoid invalidation of the warranty all text marked with these Warning Symbols should be read carefully.
all the texts marked with the Warning Symbols.**



Information in this manual is subject to change without notice and does not represent a commitment on the part of the vendor. The manufacturer shall not be liable for any loss or damage whatsoever arising from the use of information or any error contained in this manual, or through any mis-operation or fault in hardware contained in the product.

It is recommended that all maintenance and service on the product should be carried out by the manufacturer or its authorised agents. The manufacturer cannot accept any liability whatsoever for any loss or damage caused by service, maintenance or repair by unauthorised personnel

SAFETY WARNINGS

The installation and servicing instructions in this manual are for use by qualified personnel only.

Read All Instructions. All safety and operating instructions must be read before operating the product. They also must be retained for future reference, as it contains a number of useful hints for determining the best combination of equipment settings for Your particular application.

Heed All Warnings. All warnings on the product and those listed in the operating instructions must be adhered to.

Heat. This product must be situated away from any heat sources such as radiators or other products (including power amplifiers or transmitters) that produce heat.

Power Sources. This product must be operated from the type of power source indicated on the marking label and in the installation instructions. If you are not sure of the type of power supplied to your facility, consult your local power company. Make sure the AC main voltage corresponds to that indicated in the technical specifications. If a different voltage (ex. 110/115 VAC) is available, open the equipment closure and set the voltage switch on the main supply circuit, located behind the AC socket.

Power Cord Protection. Power supply cords must be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to the cords at AC wall plugs and convenience receptacles, and at the point where the cord plugs into the product.

Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

Lightning. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the AC wall outlet and the audio connections. This will prevent damage to the product due to lightning and power line surges.

Installation. Configuration and installation should only be carried out by a competent installation engineer.

Cabling. Using high-quality wires, well protected. Make sure the cable integrity.



This symbol alerts you to the presence of dangerous voltage inside the closure – voltage which may be sufficient to constitute a risk of shock. Do not perform any servicing other than that contained in the operating instructions. Refer all servicing to qualified personnel.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



Do not change the voltage setting or replace the mains fuse without first turning the unit off and unplugging the mains cord.



Make sure the AC main voltage corresponds to that indicated in the technical specifications.

THIS APPARATUS MUST BE EARTHED!



To avoid the risk of fire use the correct value fuse, as indicated on the label stuck on the right side of the unit.



This apparatus uses a single pole mains switch and does therefore not separate the unit completely from the mains power. To completely separate from mains power (f.i. in the event of danger) unplug mains power cord. As the MAINS plug is the disconnect device, the disconnect device shall remain readily operable.

CONSIGNES DE SÉCURITÉ IMPORTANTES

Lire ces consignes.

Conserver ces consignes.

Observer tous les avertissements.

Suivre toutes les consignes.

Ne pas utiliser cet appareil à proximité de l'eau.

Ne pas obstruer les ouvertures de ventilation. Installer en respectant les consignes du fabricant.

Ne pas installer à proximité d'une source de chaleur telle qu'un radiateur, une bouche de chaleur, un poêle ou d'autres appareils (dont les amplificateurs) produisant de la chaleur.

Ne pas annuler la sécurité de la fiche de terre, la troisième branche est destinée à la sécurité. Si la fiche fournie ne s'adapte pas à la prise électrique, demander à un électricien de remplacer la prise hors normes.

Protéger le cordon d'alimentation afin que personne ne marche dessus et que rien ne le pince, en particulier aux fiches, aux prises de courant et au point de sortie de l'appareil.

Utiliser uniquement les accessoires spécifiés par le fabricant.

Utiliser uniquement avec un chariot, un support ou une table spécifié par le fabricant ou vendu avec l'appareil. Si un chariot est utilisé, déplacer l'ensemble chariot–appareil avec précaution afin de ne pas le renverser, ce qui pourrait entraîner des blessures.

Débrancher l'appareil pendant les orages ou quand il ne sera pas utilisé pendant longtemps.

Confier toute réparation à du personnel qualifié. Des réparations sont nécessaires si l'appareil est endommagé d'une façon quelconque, par exemple: cordon ou prise d'alimentation endommagé, liquide renversé ou objet tombé à l'intérieur de l'appareil, exposition de l'appareil à la pluie ou à l'humidité, appareil qui ne marche pas normalement ou que l'on a fait tomber.

NE PAS exposer cet appareil aux égouttures et aux éclaboussures. Ne pas poser des objets contenant de l'eau, comme des vases, sur l'appareil.



Ce symbole indique la présence d'une tension dangereuse dans l'appareil constituant un risque de choc électrique.



Ce symbole indique que la documentation fournie avec l'appareil contient des instructions d'utilisation et d'entretien importantes.



Avant de modifier le commutateur de changement de tension ou remplacer le fusible il faut débrancher l'appareil de la prise électrique. Pendant son usage, l'appareil doit être branché à la prise de terre.



Utiliser le fusible principal AC avec la valeur qui est indiquée sur l'étiquette collée sur le coffret.



Assurez-vous que la tension principale AC correspond à celle indiquée dans les spécifications techniques.



L'interrupteur d'alimentation interrompt un pôle du réseau d'alimentation excepté le conducteur de terre de protection. En cas de danger, débrancher le cordon d'alimentation. Parce que la prise du réseau de alimentation est utilisée comme dispositif de déconnexion, ce dispositif doit demeurer aisément accessible.

ISTRUZIONI IMPORTANTI PER LA SICUREZZA

Leggere le presenti istruzioni.

Conservare queste istruzioni.

Osservare tutte le avvertenze.

Seguire scrupolosamente tutte le istruzioni.

Non usare questo apparecchio in prossimità di acqua.

Non ostruire alcuna apertura per il raffreddamento. Installare l'apparecchio seguendo le istruzioni.

Non installare l'apparecchio accanto a fonti di calore quali radiatori, aperture per l'afflusso di aria calda, forni o altri apparecchi (amplificatori inclusi) che generino calore.

Non rimuovere il terminale di connessione a terra sul cordone di alimentazione: esso ha lo scopo di tutelare l'incolumità dell'utilizzatore. Se la spina in dotazione non si adatta alla presa di corrente, rivolgersi ad un elettricista per far eseguire le modifiche necessarie.

Evitare di calpestare il cavo di alimentazione o di comprimerlo, specialmente in corrispondenza della spina e del punto di inserzione sull'apparato.

Utilizzare solo dispositivi di collegamento e gli accessori specificati dal produttore.

Utilizzare l'apparecchio solo con un carrello, un sostegno, una staffa o un tavolo di tipo specificato dal produttore o venduto insieme all'apparecchio. Se si utilizza un carrello, fare attenzione negli spostamenti per evitare infortuni causati da ribaltamenti del carrello stesso.

Scollegare l'apparecchio dalla presa di corrente durante i temporali o quando inutilizzato a lungo.

Per qualsiasi intervento, rivolgersi a personale di assistenza qualificato. È necessario intervenire sull'apparecchio ogniqualvolta si verificano danneggiamenti di qualsiasi natura. Ad esempio, la spina o il cavo di alimentazione sono danneggiati, è entrato liquido nell'apparecchio o sono caduti oggetti su di esso, l'apparecchio è stato esposto alla pioggia o all'umidità, non funziona normalmente o è caduto.

Non esporre a gocciolamenti o spruzzi. Non appoggiare sull'apparecchio oggetti pieni di liquidi, ad esempio vasi da fiori.



Questo simbolo indica la presenza di alta tensione all'interno dell'apparecchio, che comporta rischi di scossa elettrica.



Questo simbolo indica la presenza di istruzioni importanti per l'uso e la manutenzione nella documentazione in dotazione all'apparecchio.



Non sostituire il fusibile o cambiare la tensione di alimentazione senza aver prima scollegato il cordone di alimentazione. **L'APPARATO DEVE ESSERE CONNESSO A TERRA.**



Sostituire il fusibile generale con uno di identico valore, come indicato sulla etichetta applicata sul mobile dell'apparato



Assicurarsi che la tensione di rete corrisponda a quella per la quale è configurato l'apparecchio.



Questo apparato utilizza un interruttore di alimentazione di tipo unipolare e l'isolamento dalla rete elettrica non è pertanto completo. Per ottenere un isolamento totale (ad esempio in caso di pericolo), scollegare il cordone di alimentazione. Inoltre, poichè la spina di alimentazione è utilizzata come dispositivo di sezionamento, essa deve restare facilmente raggiungibile.

WICHTIGE SICHERHEITSHINWEISE

Diese Hinweise LESEN.

Diese Hinweise AUFHEBEN.

Alle Warnhinweise BEACHTEN.

Alle Anweisungen BEFOLGEN.

Dieses Gerät NICHT in der Nähe von Wasser verwenden.

KEINE Lüftungsöffnungen verdecken. Gemäß den Anweisungen des Herstellers einbauen.

Nicht in der Nähe von Wärmequellen, wie Heizkörpern, Raumheizungen, Herden oder anderen Geräten (einschließlich Verstärkern) installieren, die Wärme erzeugen.

Die Schutzfunktion des Schukosteckers NICHT umgehen. Bei Steckern für die USA gibt es polarisierte Stecker, bei denen ein Leiter breiter als der andere ist; US-Stecker mit Erdung verfügen über einen dritten Schutzleiter. Bei diesen Steckerausführungen dient der breitere Leiter bzw. der Schutzleiter Ihrer Sicherheit. Wenn der mitgelieferte Stecker nicht in die Steckdose passt, einen Elektriker mit dem Austauschen der veralteten Steckdose beauftragen.

VERHINDERN, dass das Netzkabel gequetscht oder darauf getreten wird, insbesondere im Bereich der Stecker, Netzsteckdosen und an der Austrittsstelle vom Gerät.

NUR das vom Hersteller angegebene Zubehör und entsprechende Zusatzgeräte verwenden.

NUR in Verbindung mit einem vom Hersteller angegebenen oder mit dem Gerät verkauften Transportwagen, Stand, Stativ, Träger oder Tisch verwenden. Wenn ein Transportwagen verwendet wird, beim Verschieben der Transportwagen-Geräte- Einheit vorsichtig vorgehen, um Verletzungen durch Umkippen.

Das Netzkabel dieses Geräts während Gewittern oder bei längeren Stillstandszeiten aus der Steckdose ABZIEHEN.

Alle Reparatur- und Wartungsarbeiten von qualifiziertem Kundendienstpersonal DURCHFÜHREN LASSEN. Kundendienst ist erforderlich, wenn das Gerät auf irgendeine Weise beschädigt wurde, z.B. wenn das Netzkabel oder der Netzstecker beschädigt wurden, wenn Flüssigkeiten in das Gerät verschüttet wurden oder Fremdkörper hineinfielen, wenn das Gerät Regen oder Feuchtigkeit ausgesetzt war, nicht normal funktioniert oder fallen gelassen wurde.

Dieses Gerät vor Tropf- und Spritzwasser SCHÜTZEN. KEINE mit Wasser gefüllten Gegenstände wie zum Beispiel Vasen auf das Gerät STELLEN.



Dieses Symbol zeigt an, dass gefährliche Spannungswerte, die ein Stromschlagrisiko darstellen, innerhalb dieses Geräts auftreten.



Dieses Symbol zeigt an, dass das diesem Gerät beiliegende Handbuch wichtige Betriebs- und Wartungsanweisungen enthält.



Vor Änderung der Netzspannung oder Sicherungswechsel Netzkabel trennen.
Das Gerät muss für den Betrieb geerdet werden.



Hauptsicherung nur mit einer gleichwertigen austauschen
(s. entsprechende Etikette).



Vor Einschalten Netzspannungseinstellung am Gerät überprüfen bzw. anpassen.



Inpoliger Netzschalter. In Notfälle oder für Wartungsarbeiten Netzkabel trennen. Der Netzstecker fungiert auch als Trennelement muss deshalb zugänglich bleiben.

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

LEA estas instrucciones.

CONSERVE estas instrucciones.

PRESTE ATENCION a todas las advertencias.

SIGA todas las instrucciones.

NO utilice este aparato cerca del agua.

NO obstruya ninguna de las aberturas de ventilación. Instálese según lo indicado en las instrucciones del fabricante.

No instale el aparato cerca de fuentes de calor tales como radiadores, registros de calefacción, estufas u otros aparatos (incluyendo amplificadores) que produzcan calor.

NO anule la función de seguridad del enchufe polarizado o con clavija de puesta a tierra. Un enchufe polarizado tiene dos patas, una más ancha que la otra. Un enchufe con puesta a tierra tiene dos patas y una tercera clavija con puesta a tierra. La pata más ancha o la tercera clavija se proporciona para su seguridad. Si el toma corriente no es del tipo apropiado para el enchufe, consulte a un electricista para que sustituya el toma corriente de estilo anticuado.

PROTEJA el cable eléctrico para evitar que personas lo pisen o estrujen, particularmente en sus enchufes, en los toma corrientes y en el punto en el cual sale del aparato.

UTILICE únicamente los accesorios especificados por el fabricante.

UTILICESE únicamente con un carro, pedestal, escuadra o mesa del tipo especificado por el fabricante o vendido con el aparato. Si se usa un carro, el mismo debe moverse con sumo cuidado para evitar que se vuelque con el aparato.

DESENCHUFE el aparato durante las tormentas eléctricas, o si no va a ser utilizado por un lapso prolongado.

TODA reparación debe ser llevada a cabo por técnicos calificados. El aparato requiere reparación si ha sufrido cualquier tipo de daño, incluyendo los daños al cordón o enchufe eléctrico, si se derrama líquido sobre el aparato o si caen objetos en su interior, si ha sido expuesto a la lluvia o la humedad, si no funciona de modo normal, o si se ha caído.

NO esponga este aparato a chorros o salpicaduras de líquidos. **NO** coloque objetos llenos con líquido, tales como floreros, sobre el aparato .



Este símbolo indica que la unidad contiene niveles de voltaje peligrosos que representan un riesgo de choques eléctricos.



Este símbolo indica que la literatura que acompaña a esta unidad contiene instrucciones importantes de funcionamiento y mantenimiento.



Antes de cambiar la alimentación de voltaje o de cambiar el fusible, desconecte el cable de alimentación. Para reducir el riesgo de descargas eléctricas, esta unidad debe ser conectada a tierra.



Remplazé el fusible con lo mismo, que corresponde a lo indicado en el panel del equipo.



Antes de encender, controlar que la línea de alimentación de voltaje corresponda a la indicada.



El interruptor de alimentación es unipolar. En el caso de peligro, desconecte el cable de alimentación. Porque la clavija de conexión a red sirve por la desconexión de la unidad, la clavija debe ser ubicada en proximidad de la unidad.

UNPACKING AND INSPECTION

Your equipment was packed carefully at the factory in a container designed to protect the unit during shipment. Nevertheless, we recommend making a careful inspection of the shipping carton and the contents for any signs of physical damage.

Damage & Claims

If the damage is evident, do not discard the container or packing material. Contact your carrier immediately to file a claim for damages. Customarily, the carrier requires you, the consignee, to make all damage claims. It will be helpful to retain the shipping documents and the waybill number.

Save all packing materials! If You should ever have to ship the unit (e.g. for servicing), it is best to ship it in the original carton with its packing materials because both the carton and packing material have been carefully designed to protect the unit.

Under normal conditions, no user maintenance or calibration is required. Internal links and preset controls may be set to configure the unit during installation. Any service work required should be carried out by qualified service personnel only.

We are able to offer further product support through our worldwide network of approved dealers and service agents.

To help us provide the most efficient service please would you keep a record of the unit serial number and date and place of purchase to be quoted in any communication regarding this product.

The actual equipment Serial Number is indicated on the silver label stuck on the rear panel of the equipment closure.



Tools And Equipment Needed

Only standard technician's tools are required to install this equipment.

FIRST INSTALLATION RECOMMENDATIONS

POWER SUPPLY CABLE

A power supply cable of approx. 2 mt lengths is supplied with the device, which has a moulded IEC plug attached – this is a legal requirement. The type of plug for the power supply depends on the country in which it is delivered.

If for any reason, you need to use this appliance with a different plug, you should use the following wiring guidelines in replacing the existing plug with the new one:

Earth	Green, or green and yellow
Neutral (N)	Blue
Live (L)	Brown

Supply cables should be laid in such a manner that one does not step or walk on them. They should not be squashed by any objects.

THIS EQUIPMENT MUST BE EARTHED.

The chassis is always connected to mains earth to ensure your safety: check your mains wiring and earthing before switching on.

PROTECTION AGAINST LIGHTNING



Should the device be put out of action due to being struck by lightning or excess voltage, disconnect it from the power supply without delay. Do not reconnect until the device has been checked. If in doubt contact the technical support service.

Make sure there is a suitable lightning protection to protect the device. Alternatively, you should disconnect all connectors from the device during a storm or when the device is going to be unsupervised or not used for a longer period of time.

These measures will protect against damage by lightning or excess voltage.

VENTILATION

The equipment will operate as a free-standing unit without requiring any special cooling arrangement. However, slots and openings in the product are provided for ventilation. They ensure reliable operation of the product, keeping it from overheating. These openings must not be blocked nor covered during operation.

YOU MUST LEAVE AT A MINIMUM ONE RACK UNIT OF EMPTY SPACE ABOVE THE EQUIPMENT TO ENHANCE VENTILATION AND TO GET A LONGER EQUIPMENT LIFE.

DEVICE INSTALLATION

Best setup location

The device should be installed in a 19" rack. Avoid direct sunlight, close proximity to radiators and air conditioning, dust, water, and chemicals. Choose a rack location that permits a clear view to the indicators on the device and ensure a sufficient heat dissipation of the device.

Power supply

The device is designed for operation with 100 to 240 V AC, 50 Hz to 60 Hz. Check the corresponding device labelling for compatibility to the domestic line voltage and frequency before connecting the IEC power connector to the mains supply!



WARNING

Disconnect mains power plug before you open the housing. Repair of the equipment must only be carried out by authorized and qualified personnel.

Power Supply	Please make sure that the device and the contained fuse(s) (please see p. 20) are compatible to the domestic line voltage and frequency. If the device is compatible, connect the power supply cord fully to the IEC power connector at the rear side of the device and a mains power outlet. The LCD Screen “RDS E5 only” will then turn on.
Network configuration	For delivery, the device is configured with default settings for the first connection via the IP interface.
Connect to network	Connect a network patch cable to the “10/100-Base-T” connector on the rear side of the device and your existing IP network.
Web interface	The device can be fully operated with an internet browser via the integrated web interface. Use a computer that is connected to the same IP network that the RDS E3/E5 device is connected to. Start an internet browser, Firefox/Mozilla >V2.0 Google Chrome both with Java Script activated and enter the configured IP address in the address bar of the browser. If the IP address has not been changed in step 2, please enter the default address in the address bar of the browser: 192.168.XXX.XXX .
Ready!	These first steps are only intended for a quick first start and do not cover all device functions. Please read carefully the entire manual to be able to use all functions of the device.
Important note on the Username and password	The equipment comes out from Axel Technology with a standard username: admin and password: admin Each time a NEW user, with administration rights is created, the <u>user admin disappears</u> and it is replaced by the new one just created. If all users are deleted, the standard admin – admin comes out again.

DEVICE GENERAL DESCRIPTION

FRONT PANEL

RDS E3

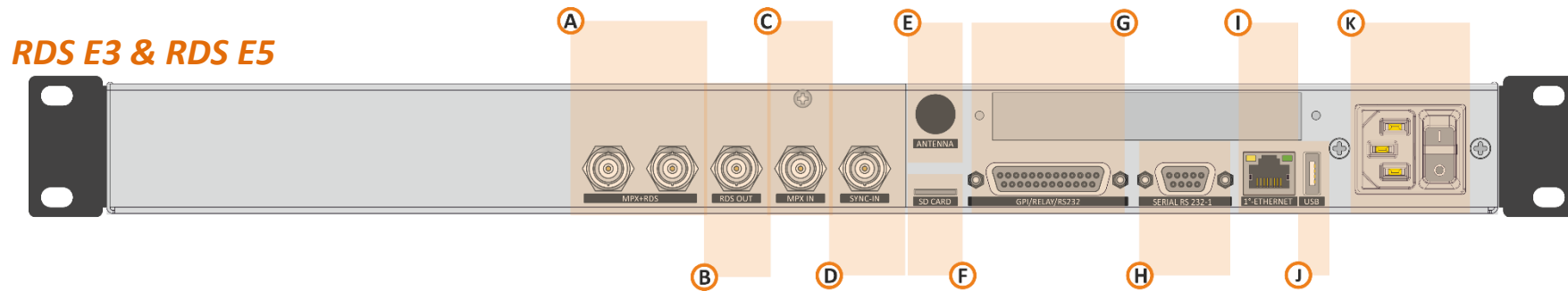


RDS E5



- Mechanical Steel, 1U - 19 " rack standard.
- USB Port - Type A.
- TFT Color Graphic Display 480x128 (only E5).
- Jog Shuttle (only E5).
- 40 Led Alarms.

REAR PANEL



- A. 2 BNC output connectors: MPX+RDS.
- B. 1 BNC output connection: RDS OUT.
- C. 1 BNC input connection: MPX IN.
- D. 1 BNC input connection: SYNC-IN.
- E. 1 BNC antenna connection input (Optional Tuner).
- F. SD Card Slot.
- G. GPIO Port with 6 optocouplers and 4 relays on DB25 PIN Female connector.
- H. 1 serial port RS232 on DB9.
- I. LAN/WAN Ethernet port.
- J. USB port - Type A.
- K. Universal Power Supply 90Vac - 240Vac 50/60Hz

1. FIRST DEVICE START

After important setting changes we suggest you always to reboot the device (For example: after a device upgrade, or changes on IP address).

1.1 STARTING YOUR RDS E3/E5 - QUICK SETUP

Turn **ON** the **RDS E3/E5** device with the power switch, on the rear panel:

Connect the device to your **LAN** with an ETHERNET CABLE. Your device could be controlled by one of the following methods:

1. The device could be controlled by a web page on your browser. In the address field of your browser, type the default IP address: **192.168.120.120** You will see the Home Page:
2. We provided you a little WIFI USB KEY. Connect it inside one of the USB ports of the device. **If you have more than a WIFI USB KEY connect once a time:**
 - a. Search for the following WIFI connection with your mobile phone, tablet or WIFI pc: **Config_AP**
 - b. Connect to **Config_Ap**
 - c. The password is **12345678**
 - d. The device could be controlled by a web page on one of your browsers. Open a browser inside your mobile phone, tablet or wifi pc and in the address field type whatever URL you want.

N.B.: do not type any *https* URLs.

DEVICE TEMPORARY IP ASSIGNMENT

<p>Take a standard USB key</p>	
<p>Inside the USB key create a new txt file - The file name must to be exactly: NetworkTEMPConfig.txt</p>	
<p>Edit NetworkTEMPConfig.txt and write inside the temporary IP you want to set for your RDS E3/E5. The syntax has to be: IP/24</p>	<p>Example: 192.168.0.14/24</p>
<p>Insert the USB key in the USB Port of the device front panel</p>	
<p>Open your browser and insert the IP in the URL address. If you plug out the IP you lose the temporary IP. (in this example we have set the 192.168.0.14 IP, but you can decide freely)</p>	

HOME PAGE

The screenshot displays the RDS E3 web interface. At the top, there's a navigation bar with 'RDS E3' and a 'LOGIN' button. Below this, a dashboard provides a comprehensive overview of the system's health and configuration. Key sections include:

- System Status:** Indicators for SYSTEM (OK), DATE & TIME (07-08-18 17:47:03), and various external feeds like REST, Samba, and GPS.
- Performance Metrics:** Gauges for CPU (41%), MEMORY (12%), and TEMPERATURE (51.6°C).
- Operational Data:** RDS signal levels, on-air groups, and RDS groups statistics.
- Target Localization:** A map showing the geographical distribution of targets across Europe, Africa, and Asia.
- Target References:** A table with columns for Name, Location, and Operator, currently showing empty rows.

In the previous screen, you can read for some parameters of your device. To see all parameters and to change them you have to login with a special Username and password.

Click **LOGIN** at top-right.

The equipment comes out from Axel Technology with a standard username – the default admin:

Username: **admin** (case sensitive)

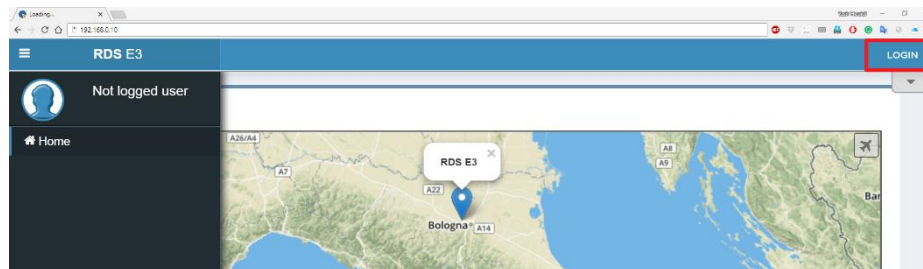
password: **admin** (case sensitive)

NB: Each time a NEW user, with administration rights is created, the user **admin** disappears and it is replaced by the new one just created. If all users are deleted, the default admin comes out again, in order to create and enter the device settings.

1.2 LOGIN

In the **Home Page**, you can read for some parameters of your device. To see all parameters and to change them you have to login with a special Username and password.

Click **LOGIN** at top-right.



The equipment comes out from **Axel Technology** with a standard username – the default admin:

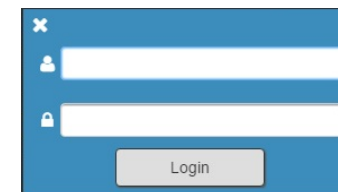
Username: **admin** (case sensitive)

password: **admin** (case sensitive)

NB: Each time a NEW user, with administration rights is created, the user **admin** disappears and it is replaced by the new one just created. If all users are deleted, the default admin comes out again, in order to create and enter the device settings.

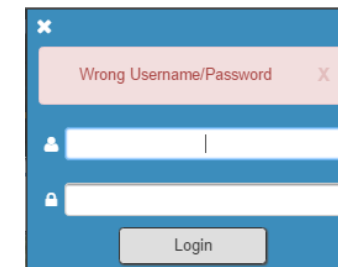
You will see the Login mask as shown in this picture:

In the first field type for your **Username**, and in the second one type for the **Password**. Then click on **Login**.



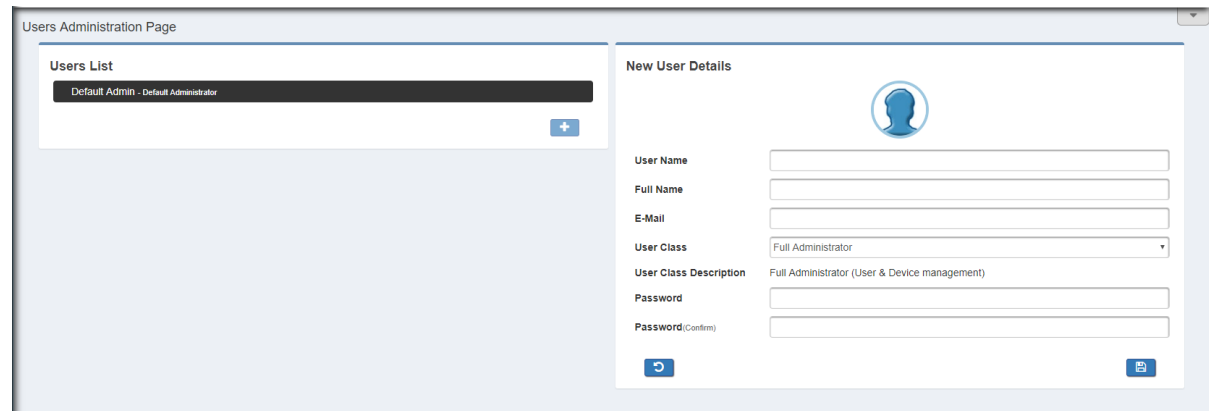
If you see the following message you typed a wrong **Username** or a wrong **Password**.

Type them again and retry.



From the **Administration Page**, you can manage all the users and the user classes. You can create or delete users choosing between the available user classes:

- Full Administrator**
- User Administrator**
- Device Administrator**
- Technician**
- Broadcaster**
- Guest**



Full Administrator

The Full Administrator manages all user profiles, accesses all pages (except the calibration).

Default Administrator (Default User): The default administrator is the default user of the device, it is under the Full Administrator category, but it has fixed access credentials (user: admin – pwd: admin). This user is visible only when the system has no other Full Administrators.

User Administrator

User Administrator. It manages the profiles of all users.

Device Administrator

Non-administrator user that accesses all pages (it does not access to administration, calibration and some of the product nameplate data).

Technician

The technician is the one who controls all the hardware parameters of the machine and the control of information pages.

Broadcaster

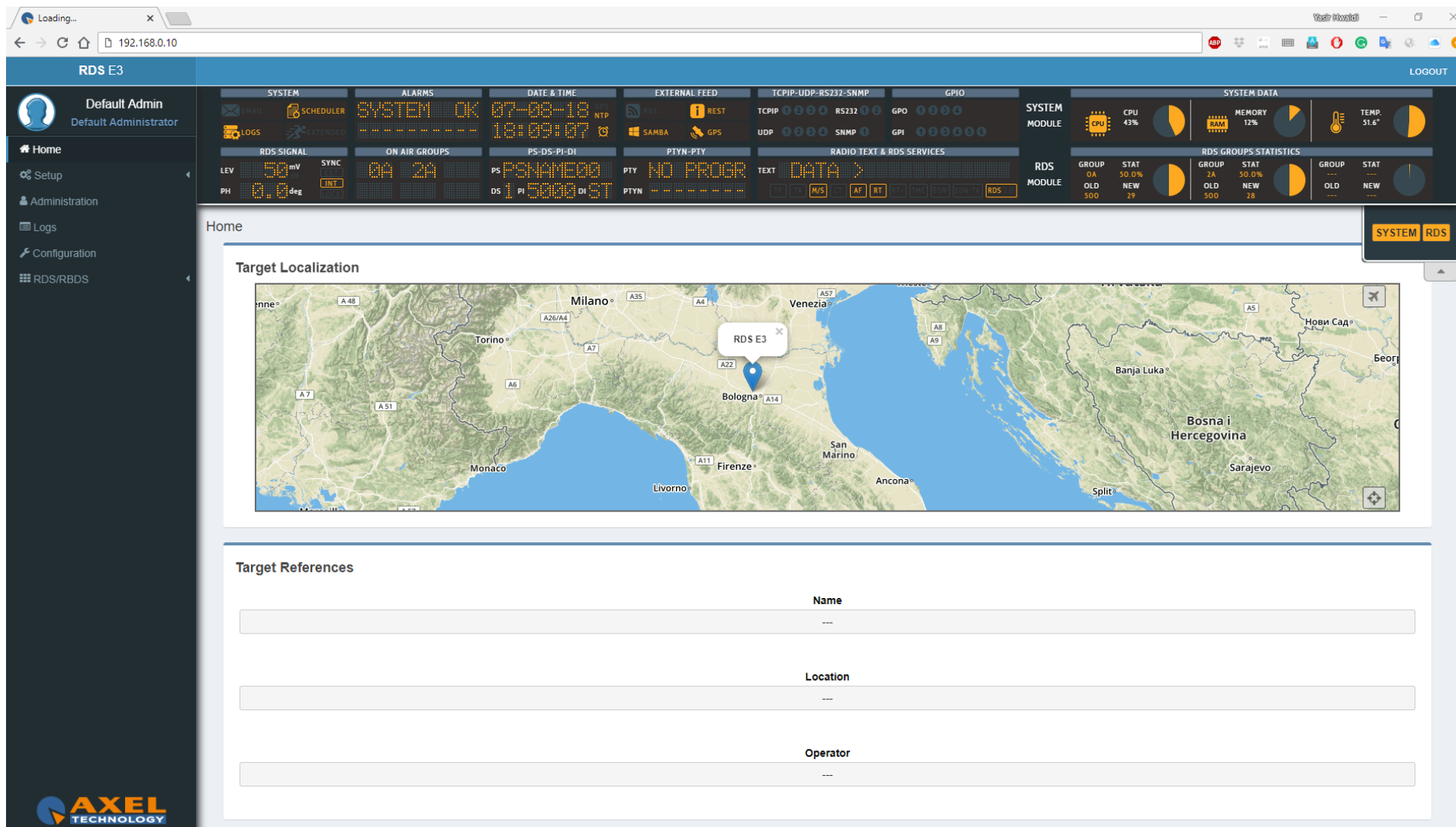
It has full control only on information management pages and on the audio signal.

Guest/Reader

Guest accesses anywhere without being able to edit any parameter.

1.3 LOGGED IN USER – HOME PAGE

Once you are logged, you will see the home page as shown in the following picture. The left-tree menu could be different for different user classes:



2. SUMMARY MASK

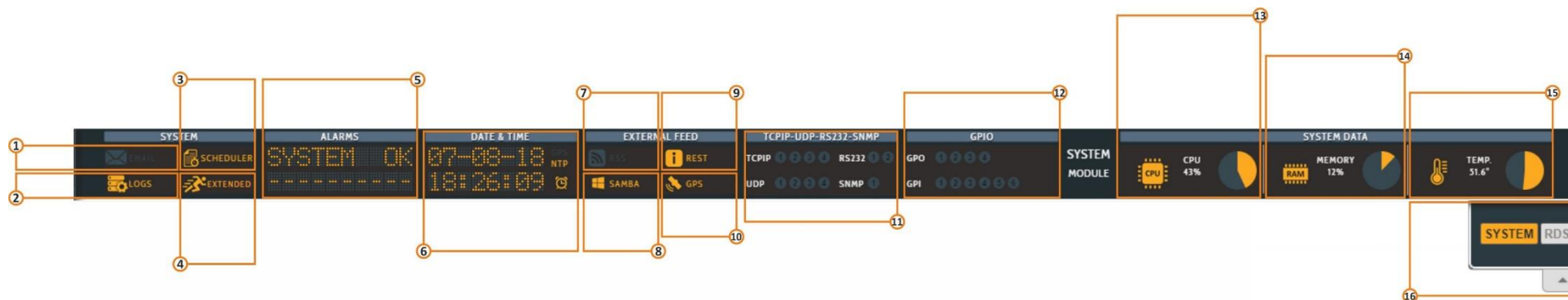
At the top of the page you can see a fast summary mask with all the current parameters and warnings as shown in the following picture:

1. **SYSTEM MODULE:** you can read from this part the most important system data management.
2. **RDS MODULE:** from this part, you can read the most important RDS parameters and status.
3. From this slide banner, you can select which sections of the mask you want to view or hide.

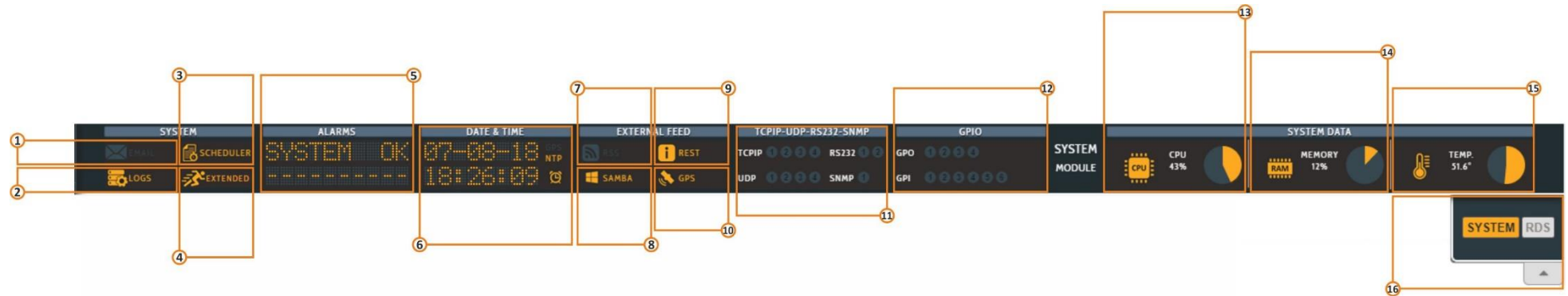
The screenshot displays a dashboard summary mask with the following sections and data:

- Section 1 (SYSTEM MODULE):** Includes SYSTEM (OK), ALARMS, DATE & TIME (07-08-18, 18:10:29), EXTERNAL FEED (SAMB, GPS), TCPIP-UDP-RS232-SNMP (TCP, UDP, RS232, SNMP), GPIO (GPO, GPI), SYSTEM DATA (CPU 43%, MEMORY 13%, TEMP 31.6°).
- Section 2 (RDS MODULE):** Includes RDS SIGNAL (LEV 50 mV, PH 0.0 deg), ON AIR GROUPS (04 2A), PS-DS-PI-DI (PS PSHAMED00, DS 1 5000 ST), PTY-PTY (NO PROGR), RADIO TEXT & RDS SERVICES (M/S, AF, RT, RDS), and RDS GROUPS STATISTICS (GROUP OA, OLD 500, NEW 491; GROUP ZA, OLD 500, NEW 490).
- Section 3 (Slide Banner):** A navigation bar with 'SYSTEM' and 'RDS' buttons.

2.1 SYSTEM

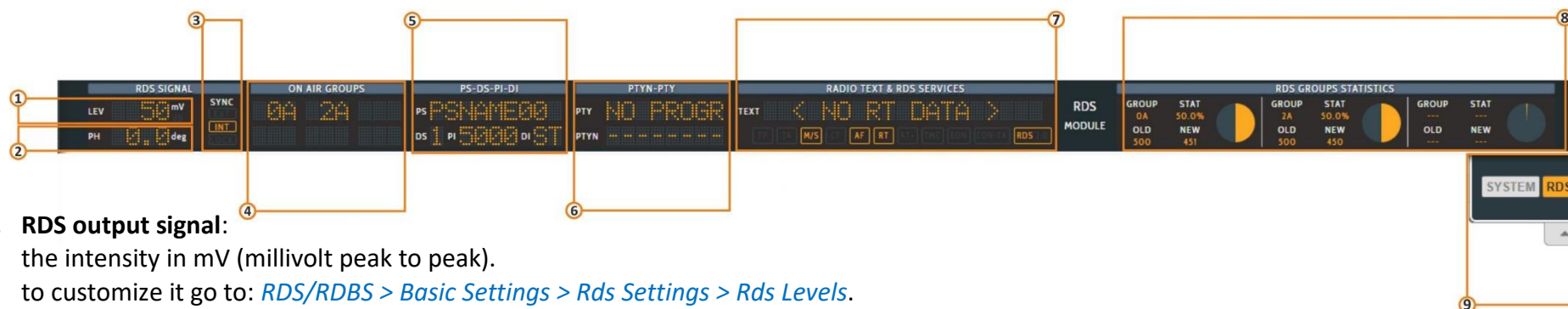


- 1. Email enabled (SMTP):** By active this service the device will send you critical reports by E-Mail scheduled. You can activate it from [SETUP>SMTP](#).
- 2. LOG status LED.**
- 3. Scheduler status.**
- 4. Extended RDS status.**
To enable/disable this Extended RDS go to [RDS/RBDS>Basic Settings > Rds Settings>RDS Global Extended Mode](#).
- 5. ALARMS:** The alarms that turn in this field are, **NTP Alarm**, **GPS Alarm**, **SMB Alarm**, **RDS OFF** and **RDS Synch**. To see them, the relative alarms must be unmasked and an error condition must be created.
- 6. Here you can view Date and Time.**
Enable/Disable an **NTP** Server. To enable/disable it go to [Setup>NTP>Ntp On](#).
Enable/Disable a **GPS** device. To enable/disable it go to [Setup>GPS>General Settings>GPS On](#).
Enable/Disable the **UTC** (Coordinated Universal Time). To enable/disable it go to [SETUP>GPS>Get UTC from GPS](#).
- 7. RSS FEED Status.**



8. **SAMBA server Status:** By activating this function you are able to get the title and author of the songs from playout software like **DJPRO**. You can activate it from [SETUP>GENERAL SETUP>SMB/SAMBA SHARE SETTINGS](#). To air title and author of the songs you have to type the “.xml” file name in [RDS/RBDS>BASIC SETTINGS>RDS SETTINGS>SMB/SAMBA SHARE SETTINGS](#).
9. **REST Api Status:** To change it go to [SETUP>General Setup>REST Settings](#).
10. **GPS:** To enable/disable it go to [SETUP>GPS](#).
11. **TCPIP:** You can connect the device to a maximum of 4 TCP/IP devices. The related led lights up when UECP packets are received.
SERIALS: You can connect the device to a maximum of 2 Serial devices. The related led lights up when UECP packets are received.
UDP: You can connect the device to a maximum of 4 UDP devices. The related led lights up when UECP packets are received.
SNMP: The lights up when SNMP UECP packets are received.
12. **GPO:** You can connect the device to a maximum of 4 GPO devices (GPO1, GPO2, GPO3, GPO4). These LEDs indicate the status of the related GPO device. To set GPO settings go in [Setup>GPIO>GPO \(1/2/3/4\)](#) and in [Setup>GPIO>GPO Event Notification](#). GPO1, GPO2, GPO3, GPO4.
GPI: you can connect a maximum of 6 GPI devices. These LEDs light up when the related GPI device is turned on.
13. Here you can view the statistics connected with the **CPU** usage.
14. Here you can view the statistics connected with the **Memory** usage.
15. Here you can view the statistics connected with the system **temperature**.
16. From this slide **banner**, you can select which sections of the mask you want to view.

2.2 RDS MODULE



- 1. RDS output signal:**
 the intensity in mV (millivolt peak to peak).
 to customize it go to: [RDS/RBDS > Basic Settings > Rds Settings > Rds Levels](#).
- 2. Phase:** The RDS signal must respect a phase criterion (in phase or in quadrature) with the 19 kHz pilot tone. Here you can see the actual phase of your RDS signal. You can find it in [RDS/RBDS > Basic Settings > Rds Settings > Rds Levels > Phase\(Deg\)](#).
- 3. SYNC:** Synchronism between RDS signal and pilot frequency.
Int: internal pilot managed by the RDS.
EXT: external pilot (Sync In, Mpx in).
LOCK: it is to indicate if the external pilot is locked or not.
 to customize it go to: [RDS/RBDS > Basic Setting > Rds General Setting > Rds Synchronism](#).
- 4. ON AIR GROUPS:** Here you can view RDS groups sequence ONAIR. You can read all the enabled RDS groups.
- 5. PS-DS-PI-DI:**
PS: (Programing Services Name). to customize it go to: [RDS/RBDS > Standard Mode > Uecp Main PS > Basic Settings](#).
DS: (Data Set) you can select one from 8 Dataset, all of them are configurable. [RDS/RBDS > Basic Settings > Rds Setting > Active Dataset Selection](#).
PI: (Program Identification code) allows the radio to display the name of the radio station. [RDS/RBDS>Standard Mode>Uecp Main PS>Basic Settings](#).
DI: (Decoder Information/Identification). The Decoder Identification identifies different operating modes. This enables controlling of individual decoders. Additionally, it indicates if static or dynamic PTY codes are transmitted. For example:
 - Mono or Stereo
 - Artificial Head, No Artificial Head
 - Compressed, Not Compressed
 - Static PTY Codes, Dynamic PTY Codes
 The decoder information is transmitted in the groups 0A, 0B and 15B. [RDS/RBDS > Standard Mode > Uecp Main PS > Basic Settings](#).

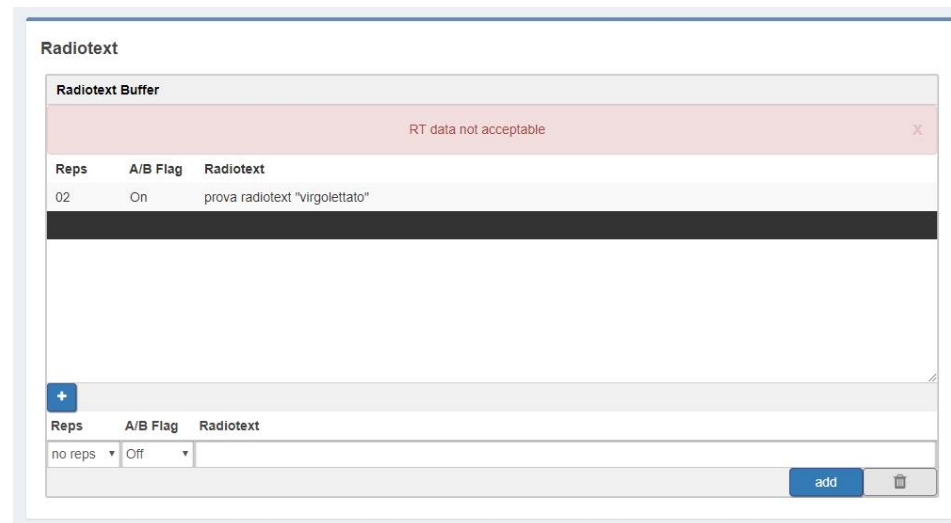


6. PTY: (Program Type) This is an identification number to be transmitted with each program item and which is intended to specify the current Program type within 31 possibilities.

PTYN: (Program Type Name) The **PTYN** feature is used to further a more specific **PTY** description that the broadcaster can freely decide (e.g. PTY=4: Sport and PTYN: Football).

to customize it go to: [RDS/RBDS > Standard Mode > Uecp Main PS > Basic Settings](#).

7. RADIO TEXT: Some receivers do not support the Radiotext service. The text can be up to 64 characters long. if your text more than 64 characters you will get an error message. Watch the next figure. To add a new text, follow these steps: [RDS/RBDS > Standard Mode > Uecp Radiotext > Radiotext](#)





RDS SERVICES:

TP: (Traffic Program Identification) to activate it go to: [RDS/RBDS > Standard Mode > Uecp Main PS > Basic Settings](#).

TA: (Traffic Announcement identification) to activate it go to: [RDS/RBDS > Standard Mode > Uecp Main PS > Basic Settings](#).

M/S: (Music / speech switch) to activate it go to: [RDS/RBDS > Standard Mode > Uecp Main PS > Basic Settings](#).

CT: (Clock-Time and Data) to activate it go to:

AF: (Alternative frequencies list) to activate it go to: [RDS/RBDS > Standard Mode > Uecp Main AF > Alternative Frequencies](#).

RT: (Radiotext) to customize it go to: [RDS/RBDS > Standard Mode > Uecp Radiotext > Radiotext](#).

RT+: (Radiotext Plus) to customize it go to:

TMC: (Traffic Information via Traffic Message Channel) to activate it go to: [RDS/RBDS > Standard Mode > Uecp Main PS > Slow Labelling Codes](#).

EON: (Enhanced Other Networks Information) to customize it go to: [RDS/RBDS > Standard Mode > Uecp Eon PS > Eon Basic Settings](#).

EON-TA: (The Traffic Announcement Identification Flag of the other program can be transmitted via EON) to customize it go to: [RDS/RBDS > Standard Mode > Uecp Eon PS > Eon Basic Settings](#).

RDS 2.0

8. **RDS GROUPS STATISTICS:** Here you can view a rotation with the statistics of the active groups.
9. From this banner, you can select which sections of the mask you want to view.

3. MENU

3.1 HOME

If you resize your browser press the top-left button to open the menu:

From here can display the MENU

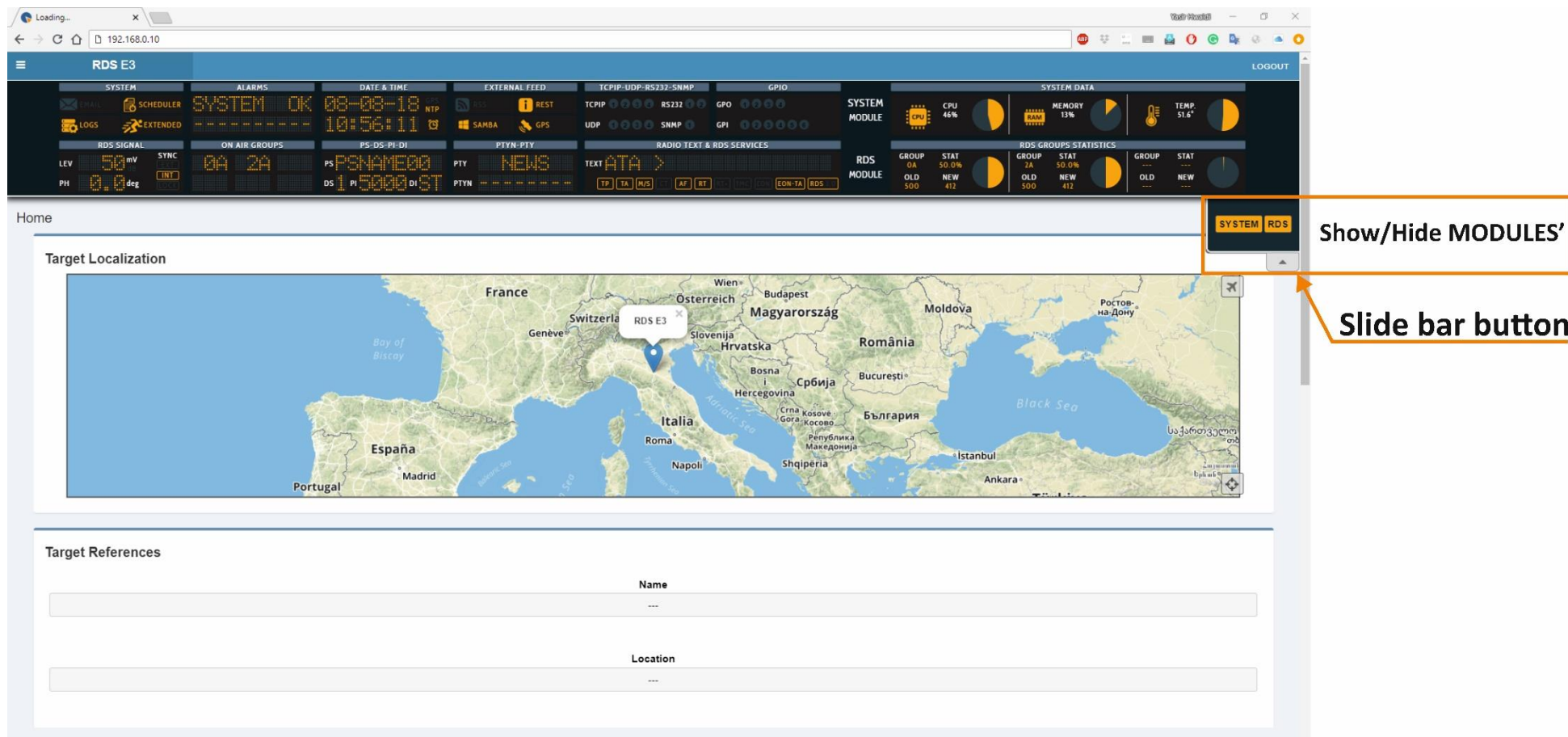
The screenshot shows a web browser window displaying the RDS E3 interface. An orange arrow points to a hamburger menu icon in the top-left corner, labeled "MENU". The interface includes several data panels:

- SYSTEM:** SCHEDULER, SYSTEM OK, DATE & TIME (08-08-18), NTP, REST, TCPIP, RS232, GPIO, SAMBA, GPS, UDP, SNMP, GPI.
- SYSTEM DATA:** CPU (44%), MEMORY (13%), TEMP (51.6°).
- RDS SIGNAL:** LEV (50 mV), SYNC, PH (0.0 deg), ON AIR GROUPS (0A 2A), PS (PSNAME00), PTY (NEWS), TEXT (DATA).
- RDS GROUPS STATISTICS:** GROUP OA (50.0%), STAT (343), GROUP 2A (50.0%), STAT (342).

Below the panels is a "Home" section with a "Target Localization" map of Europe and the Middle East. Below the map is a "Target References" table with columns for Name, Location, and Operator.

Name	Location	Operator
---	---	---
---	---	---

To show or hide the MODULE's canvas, Open the slide bar button under the SUMMARY MASK as shown in next figure.



In this page can find all information about the device like name, location, IP, Firmware version and serial number. The Target Localization module provides detection of a specified target (RDS E3/E5 location)it is used in case that you have many RDS service points.

To modification these parameters go to [Home > Setup > General Setup](#).

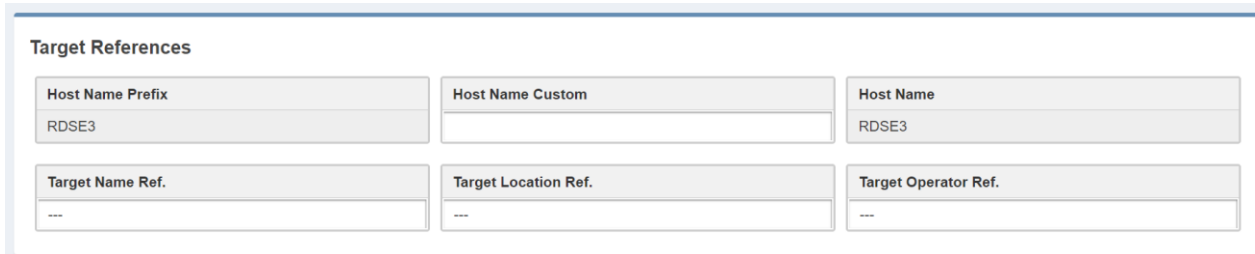
3.2 SETUP

By clicking on the setup you can see all the available setup subpages as shown in the following picture.

3.2.1 GENERAL SETUP

In [Setup > General Setup](#) you have different general parameters to start with the device setup:

Target References



Host Name Prefix: default field with the Product Name. This parameter is unchangeable.

Host Name Custom: customizable parameter. Type here the desired device name. This parameter helps you to recognize the device in your computer network.

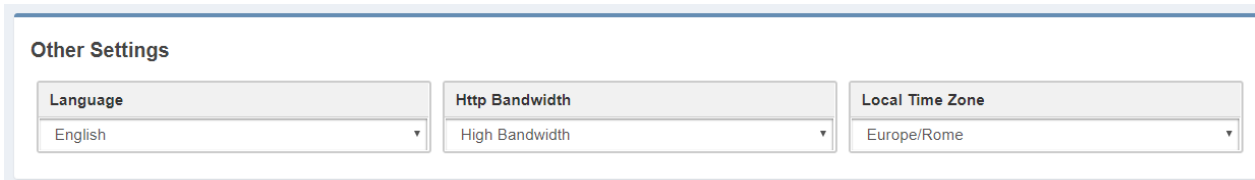
Host Name: Host Name Prefix(fixed value) + Host Name Custom.

Target Name Ref.: Type here a desired name for the device.

Target Location Ref.: Type here the device location.

Target Operator Ref.: Type here the Operator name.

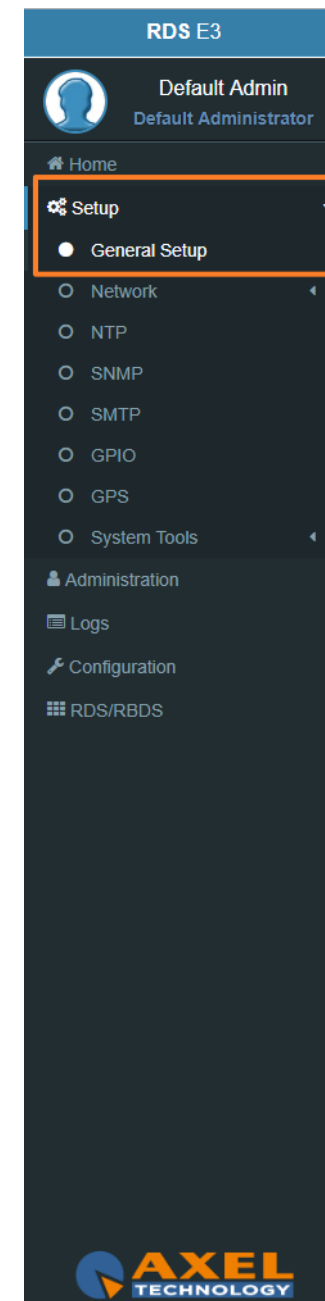
Other Settings



Language: Select here the desired device language.

Http Bandwidth: Select here between GPRS, Low, Normal or High bandwidth.

Local Time Zone: Select from the drop-down menu the desired Time Zone.



REST Settings

REST Settings

<input checked="" type="checkbox"/> Active	Port 5000
--	---------------------

Active: Check/Uncheck this box if you want to activate/deactivate the REST API for the device.

Port: RDS E3 Coder is active on port 5000.

The REST APIs in this device are intended as Extended Mode parameter. To allow the REST APIs to work, we advise you to set also the following parameters in the following ways:

[RDS/RBDS](#) > [Basic Settings](#) > [Rds Settings](#) > [Rds General Settings](#) > [Rds Global Extended Mode](#) > **Enabled**

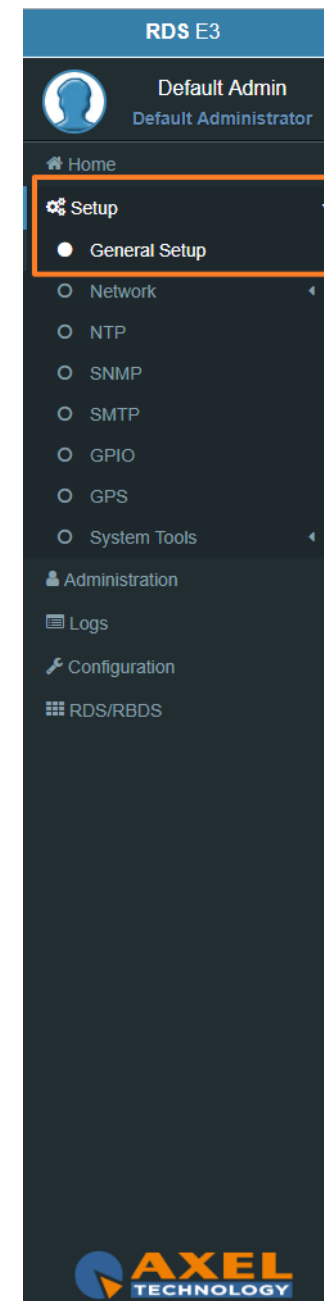
go in **[Rds/Rbds](#) > [Extended Mode](#)** and in the single service you want to enable set:

Dataset Operative Mode = **Extended Mode**

Extended Source = **Rest Command**

The REST interface allows to manage the following EXTENDED MODE parameters:

- Active Dataset;
- Aired Program Service Name;
- Aired Radiotext;
- Aired Program Type;
- Aired Program Type Name;
- Traffic Announcement;
- Music/Speech;
- All 10 EON-TA;



Below are examples of REST API. In the following lines the syntax:

(READ)

http://<PC IP or Url>:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=<variable name>

(WRITE)

http:// <PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=<variable name>&VARVALUE=<value to set>

DATASET

(READ)

http://<PC IP or Url>:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=DSET_Ext_DYN

(WRITE)

http:// <PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=DSET_Ext_DYN&VARVALUE=x

where x can be 1 , 2, 3, 4, 5, 6, 7, 8.

Aired Program Service Name

(READ)

http://<PC IP or Url>:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=PSN_Ext_DYN_Local

(WRITE)

http:// <PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=PSN_Ext_DYN_Local&VARVALUE=aaaaaaaa

where *aaaaaaaa* is a string of 64 characters max. The string can be composed by symbols and accented letters.

It is also possible to act on the EXTENDED MODE parameters of the Program Service Name:

Extended PSN Buffer Mode

At the moment it is fixed on *Scrolling*. The variable can only be read. The reference variable is **PSN_Buffer_Mode**.

(READ)

http://<PC IP or Url>:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=<PSN_Buffer_Mode>

Extended PSN Scrolling Speed

The reference variable is **PSN_Scrolling_Speed**. It can take the following values:

"Fastest", "Fast", "Normal", "Slow", "Slowest"

(READ)

http://<PC IP or Url>:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=<PSN_Scrolling_Speed>

(WRITE)

http:// <PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=<PSN_Scrolling_Speed>&VARVALUE=<Fastest>

Extended PSN Scrolling Steps

The reference variable is **PSN_StepMode**. It can assume values from 1 to 8 and represents the number of characters that flow each time.

(READ)

http://<PC IP or Url>:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=<PSN_Step_Mode>

(WRITE)

http:// <PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=<PSN_Step_Mode>&VARVALUE=<x>

where x can be 1, 2, 3, 4, 5, 6, 7, 8.

Extended PSN Auto Return Mode

The reference variable is **PSN_Return_Mode**. This variable can be the following values:

"Disabled", "After 1 Loop", "After 2 Loops", "After 3 Loops", "After 4 Loops", "After 5 Loops"

and it indicates the behaviour of the writing in the buffer. The Disabled value says that the writing will rotate indefinitely. The other values indicate the number of revolutions of the writing before the buffer is cleaned up and the writing deleted.

(READ)

http://<PC IP or Url>:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=<PSN_Return_Mode>

(WRITE)

http:// <PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=<PSN_Return_Mode>&VARVALUE=<After 1 Loop>

Aired Radiotext

(READ)

http://<PC IP or Url>:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=RT_Ext_DYN_Local

(WRITE)

http://<PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=RT_Ext_DYN_Local&VARVALUE=aaaaaaaa

where *aaaaaaaa* is a string of 255 characters long. The string can be composed by symbols and accented letters.

Aired Program Type

(READ)

http://<PC IP or Url >:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=PTY_Ext_DYN

(WRITE)

http://<PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=PTY_Ext_DYN&VARVALUE=x

where x is a value from 0 to 31 which encodes the PTY according to the standard.

Aired Program Type Name

(READ)

http://<PC IP or Url>:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=PTYN_Ext_DYN_Local

(WRITE)

http://<PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=PTYN_Ext_DYN_Local&VARVALUE=aaaaaaaa

where *aaaaaaaa* is a string of 8 characters at the max that can contain symbols and accented letters.

Traffic Announcement

(READ)

http://<PC IP or Url >:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=TA_Ext_DYN

(WRITE)

http://<PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=TA_Ext_DYN&VARVALUE=x

where x can be *Off* or *On*.

Music/Speech

(READ)

http://<PC IP or Url>:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=MS_Ext_DYN

(WRITE)

http://<PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=MS_Ext_DYN&VARVALUE=x

where x can be *Speech* or *Music*.

EON Traffic Announcement

(READ)

http://<PC IP or Url>:5000/REST/send/READ?TOKEN=AX&MOD=RDS&VARNAME=EON_TA_n_Ext_DYN

where n can be a number from 1 to 10 (ex: EON_TA_7_DYN).

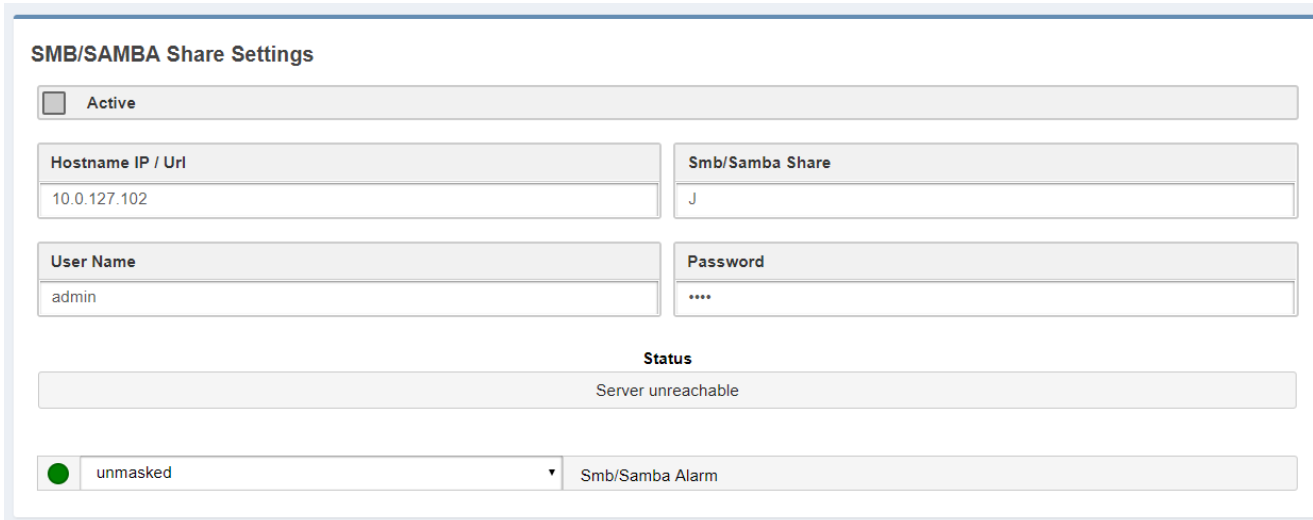
(WRITE)

http://<PC IP or Url>:5000/REST/send/WRITE?TOKEN=AX&MOD=RDS&VARNAME=EON_TA_n_Ext_DYN &VARVALUE=x

where x can be *Off* or *On*.

SMB/SAMBA Share Settings

SMB Server Message Block. This section helps you to air **TITLE** and **AUTHOR** of the aired song by the DJPRO playout Dalet and with MB Studio. These 2 parameters will be aired via **RDS** directly from our playout software DJPRO in your **RADIOTEXT**. In the following pictures, you can find all the settings.



SMB/SAMBA Share Settings

Active

Hostname IP / Url: 10.0.127.102

Smb/Samba Share: J

User Name: admin

Password: ****

Status
Server unreachable

unmasked Smb/Samba Alarm

Active: Check/Uncheck this parameter to activate/deactivate the control on the playout folder.

Hostname IP / URL: Type here the IP/URL of the PC where the Playout software writes the (TXT, XML, INI,...) file with the playlist (for example [//192.168.99.7](http://192.168.99.7)).

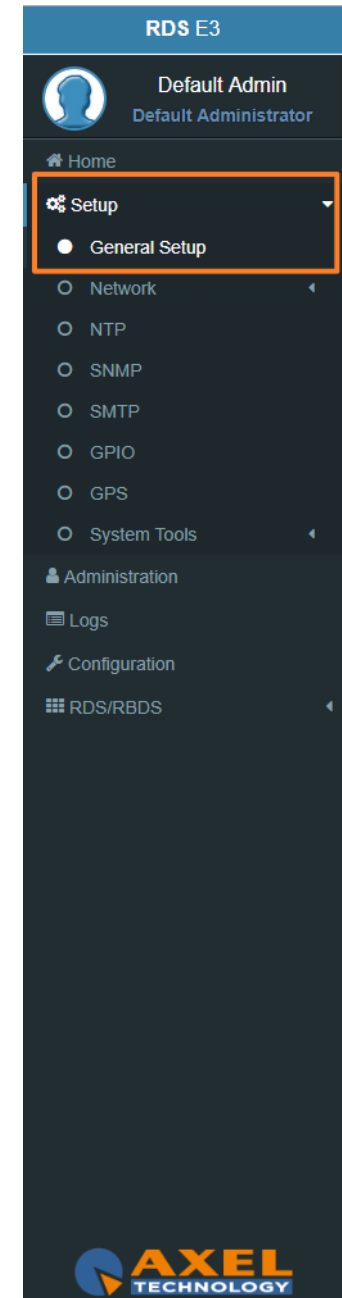
Smb/Samba Share: Type here the shared resource where the xml file is saved (for example: J).

Attention, here it is not possible to write a classic path, but only a shared resource.

User Name: Type here the shared resource Username.

Password: Type here the shared resource Password.

Masked/Unmasked: decide here if you want to mask/unmask the Alarms related to the connectivity with the PC / Shared Resource. If you see SMB/SAMBA Alarms something is wrong with the IP/URL, Smb/Samba Share or USERNAME and PASSWORD.




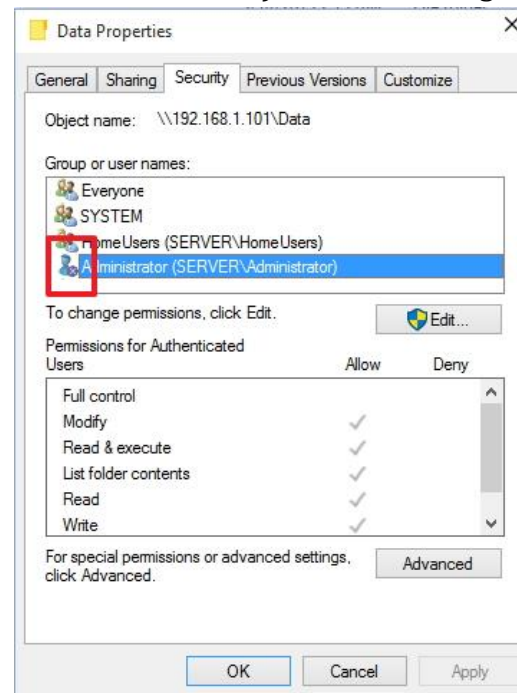
In the next image, you can see the DJPRO setup area where you can set the xml path.

Go to SETUP ON-AIR MANAGER, select your ONAIR, click on OPEN SETUP, click on EXTERN and go in RDS Settings.

3.2.1.1 TROUBLESHOOTING ACCESSING SMB/SAMBA SHARED FOLDER

If it is no longer possible to access the folder previously set in the SMB / SAMBA SHARE parameter, the cause may be a lack of user access rights (SMB / SAMBA folder side):

1. Go to the PC where the shared folder resides
2. Right click on the folder
3. Click on Properties to verify
4. If there are problems like those highlighted (with the error cross ) in the following image, go on with the steps below



5. in this same pc create a new windows user dedicated:
 username: **rdse3**
 password: **rdse3**
6. provide this new user with full access to the SMB / SAMBA SHARE folder
7. in the web panel of the Rds E3, go to the SETUP menu> GENERAL SETUP> SMB / SAMBA SHARE> User Name = **rdse3**
8. in the web panel of the Rds E3, go to the SETUP menu> GENERAL SETUP> SMB / SAMBA SHARE> Password = **rdse3**

Target Localization

Target Localization

Manual Target Coordinates

Latitude	Longitude	Marker Baloon Field

Manual Target Coordinates: Check/Uncheck this parameter to activate/deactivate the Manual Target Coordinates insertion.

Latitude: Latitude insertion is activated when **Manual Target Coordinates** is checked. Type here the manual latitude.

Longitude: Longitude insertion is activated when **Manual Target Coordinates** is checked. Type here the manual longitude.

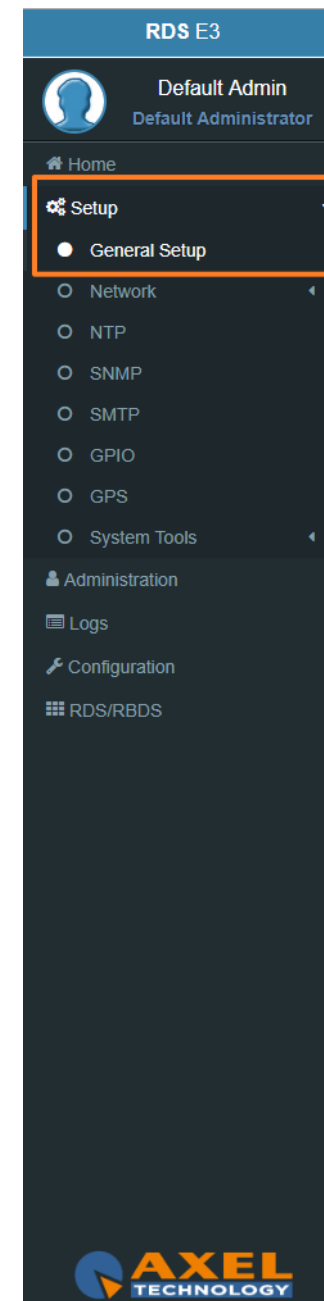
Marker Baloon Field: Insert here what you want to read on the map Marker Baloon at the selected coordinates.

Manual Target Clock Synchronization

Manual Target Clock Synchronization

Synchronize Target with Client Clock

Synchronize Target with Client Clock: synchronizes the clock with the client pc clock .



The screenshot shows the RDS E3 web interface. At the top, it says "RDS E3" and "Default Admin / Default Administrator". The main navigation menu is on the right, with "Setup" highlighted in orange. Under "Setup", "General Setup" is selected with a radio button. Other options include Network, NTP, SNMP, SMTP, GPIO, GPS, and System Tools. Below the menu, there are sections for Administration, Logs, Configuration, and RDS/RBDS. The Axel Technology logo is at the bottom right.

3.2.2 NETWORK

In [Setup > Network > ethx](#) you have different parameters to set configurations for the device network connection and addressing:

Mac Address



eth0 (Setup > Network)

Mac Address

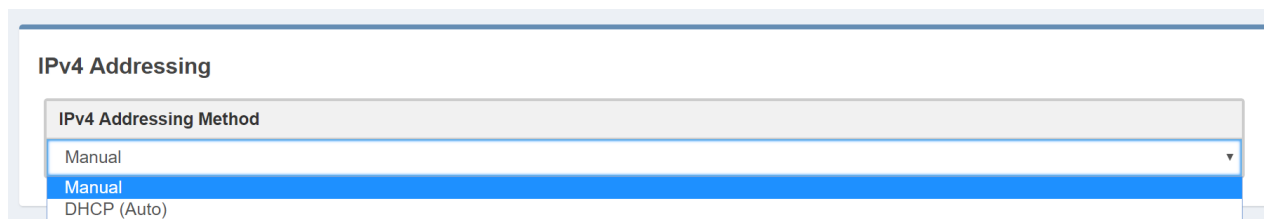
MacAddress

50:A4:D0:D0:00:F6

MacAddress: Here you can read the device Mac Address.

In [General Configuration](#) you can read for all the current network settings.

IPv4 Addressing



IPv4 Addressing

IPv4 Addressing Method

Manual

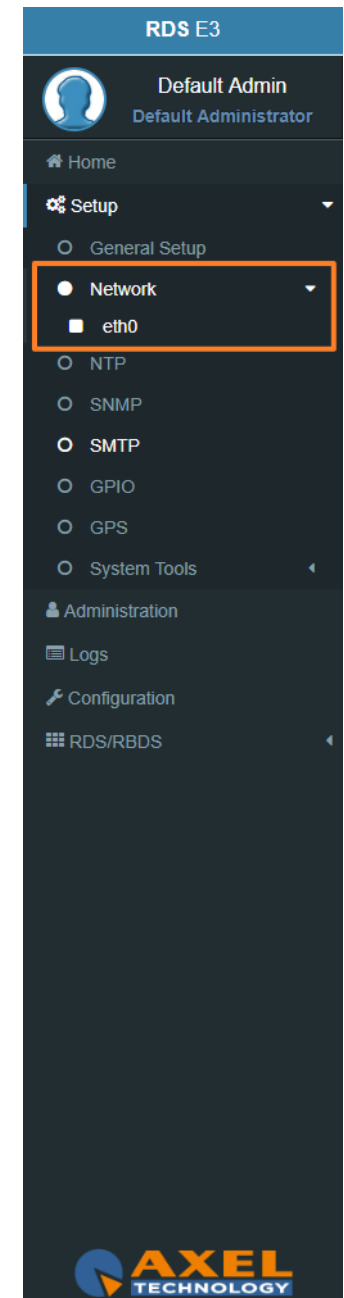
Manual

DHCP (Auto)

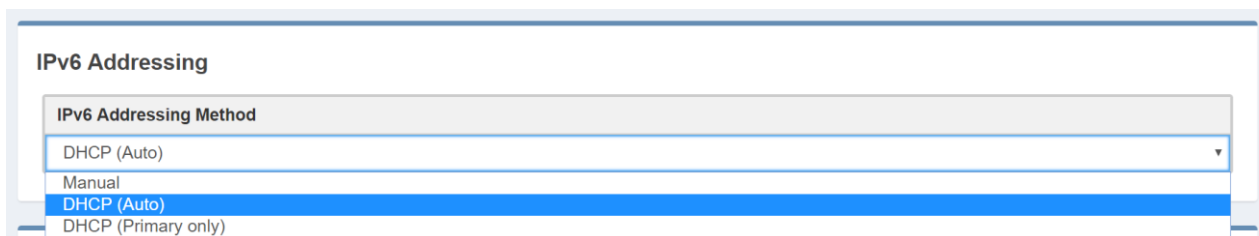
IPv4 Addressing Method: choose here the Addressing Method. You can choose between Manual or DHCP(auto).

Manual: if you choose Manual you have to insert all IPv4 and DNS IPv4 data.

DHCP(auto): a DHCP (Dynamic Host Configuration Protocol) server dynamically distributes network configuration parameters.



IPv6 Address



The screenshot shows the 'IPv6 Addressing' configuration section. It features a dropdown menu titled 'IPv6 Addressing Method' with four options: 'DHCP (Auto)', 'Manual', 'DHCP (Auto)', and 'DHCP (Primary only)'. The 'DHCP (Auto)' option is currently selected and highlighted in blue.


IPv6 Addressing Method: choose here the Addressing Method. You can choose between Manual or DHCP(auto).

Manual: if you choose Manual you have to insert all IPv6 and DNS IPv6 data.

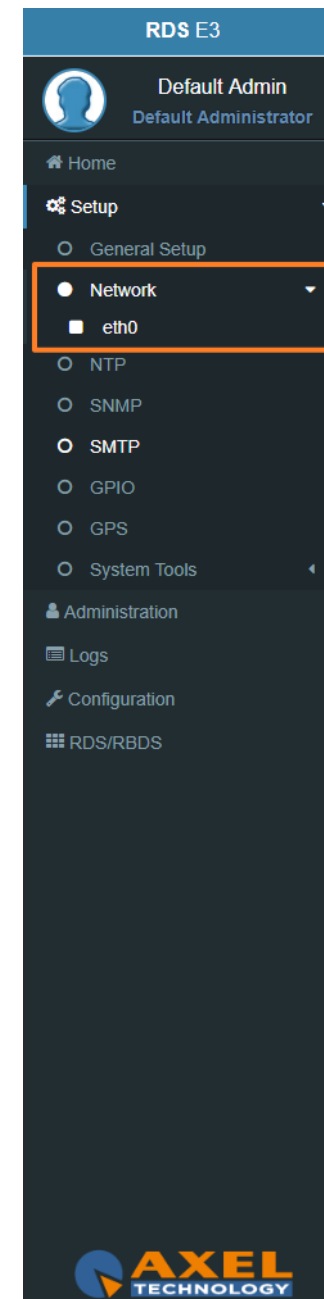
DHCP(auto): a DHCP (Dynamic Host Configuration Protocol) server dynamically distributes network configuration parameters.

In the following setting sections you can fill all the desired IP data if you have set Manual Addressing Method:

Primary IPv4



The screenshot shows the 'Primary IPv4' configuration section. It contains three input fields: 'Address' with the value '10.0.127.80', 'Subnet Mask' with the value '255.255.0.0', and 'Gateway (Default)' with the value '10.0.127.100'.



The screenshot shows the RDS E3 navigation menu. The menu is titled 'RDS E3' and includes a user profile for 'Default Admin' (Default Administrator). The main menu items are: Home, Setup (expanded), Administration, Logs, and Configuration. The 'Setup' menu is expanded to show: General Setup, Network (expanded), NTP, SNMP, SMTP, GPIO, GPS, and System Tools. The 'Network' menu is further expanded to show 'eth0'. The 'AXEL TECHNOLOGY' logo is visible at the bottom of the menu.

DNS IPv4

DNS IPv4

Primary DNS

Additional #1 DNS

Additional #2 DNS

Enable(Primary DNS IPv4): If it is needed, click on the checkbox to enable a Primary DNS IPv4 .

Primary DNS(IPv4): type here the IP of the desired DNS server.

Enable(Additional #1 DNS IPv4): Check it to enable the first additional DNS IPv4 Server.

Additional #1 DNS(IPv4): type the IP of the DNS server.

Enable(Additional #2 DNS IPv4): Check it to enable the second additional DNS IPv4 Server.

Additional #2 DNS(IPv4): type the IP of the DNS server.

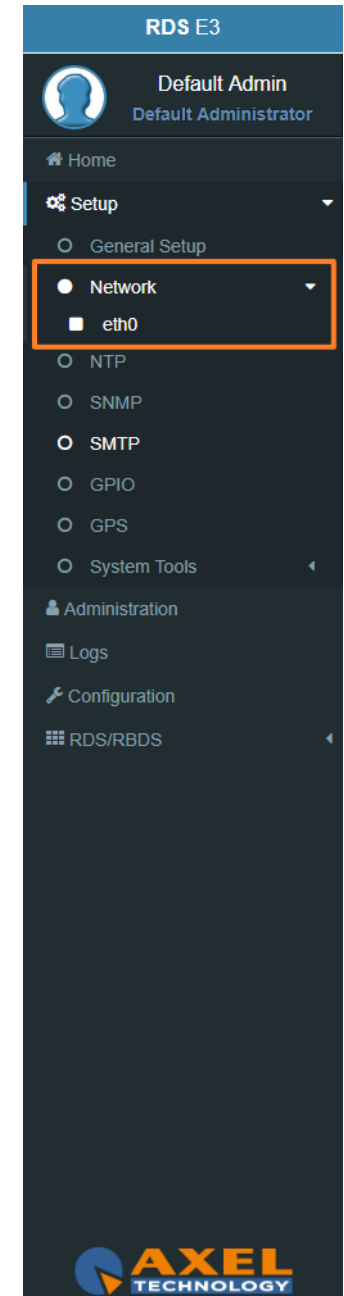
DNS IPv6

DNS IPv6

Primary DNS

Additional #1 DNS

Additional #2 DNS



Enable(Primary DNS IPv6): If it is needed, click on the checkbox to enable a Primary DNS IPv6.

Primary DNS(IPv6): type here the IP of the desired DNS server.

Enable(Additional #1 DNS IPv6): Check it to enable the first additional DNS IPv6 Server.

Additional #1 DNS(IPv6): type the IP of the DNS server.

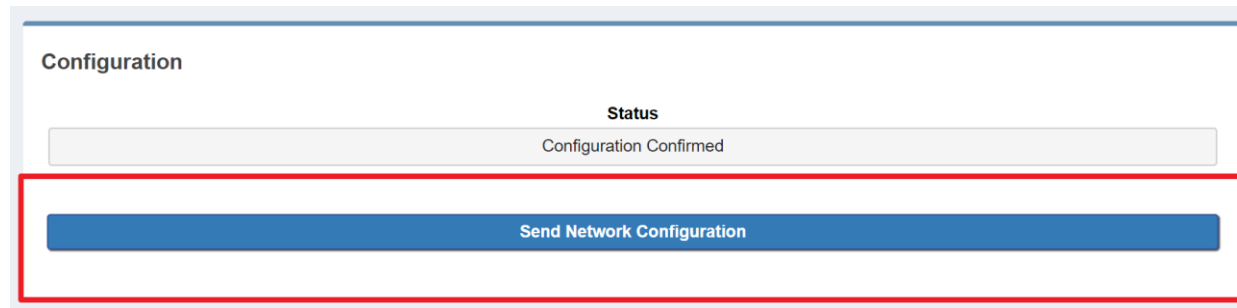
Enable(Additional #2 DNS IPv6): Check it to enable the second additional DNS IPv6 Server.

Additional #2 DNS(IPv6): type the IP of the DNS server.

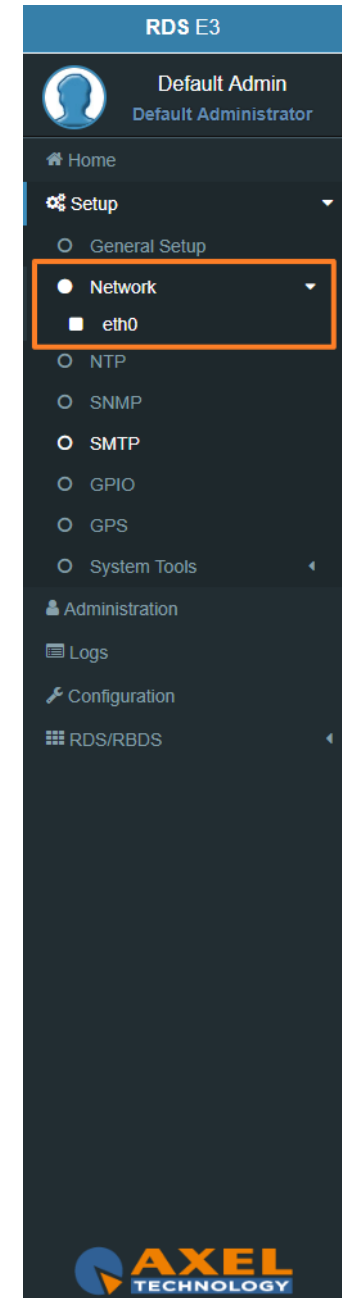
CONFIGURATION

The next two parameters are used to save all previous network settings. The first following button gives a first confirmation of the network parameters, but to make it really effective it is necessary to access the new IP within 5 minutes and it is necessary to press Confirm Network Configuration. This double security is useful in case you have entered wrong addresses or in case there are network problems.

Send Network Configuration: By clicking on this button you send the new network configuration.

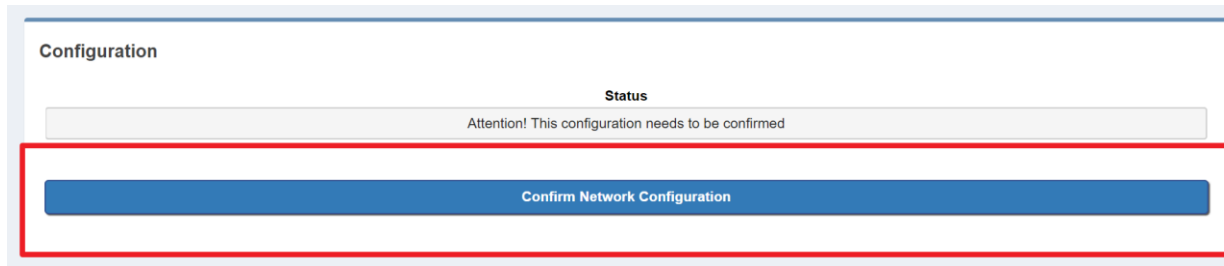


The screenshot shows a web interface for network configuration. At the top, there is a 'Configuration' header. Below it, a 'Status' section displays 'Configuration Confirmed' in a light gray box. At the bottom, a prominent blue button labeled 'Send Network Configuration' is highlighted with a red rectangular border.

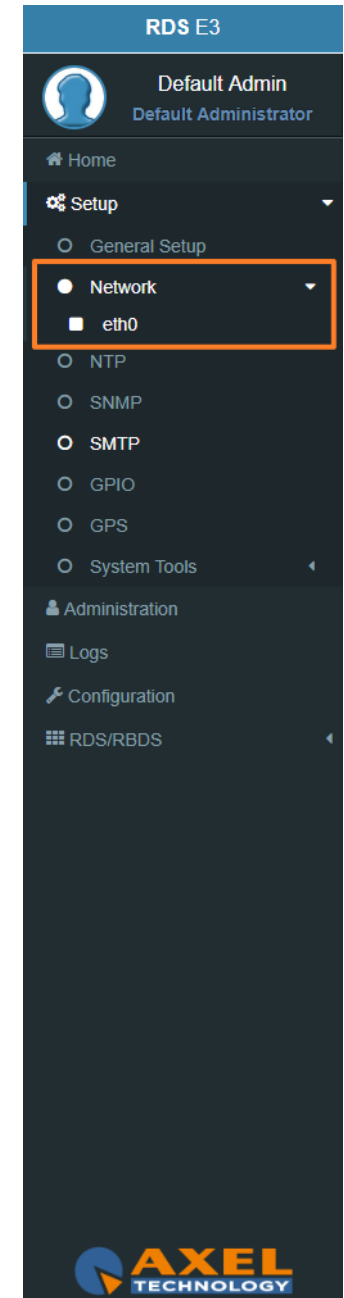
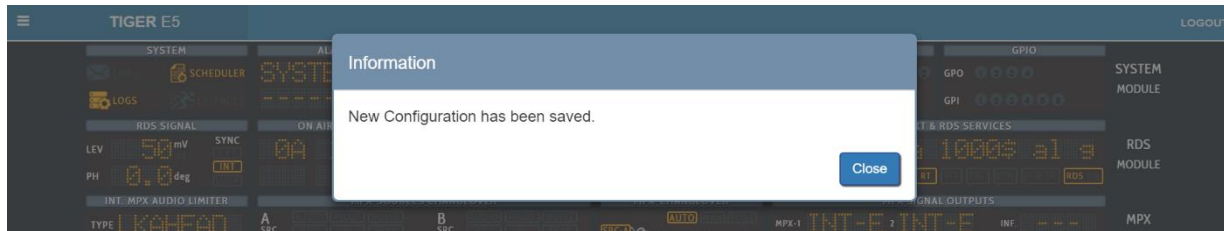


The screenshot shows the RDS E3 setup menu. The 'Setup' section is expanded, showing options like 'General Setup', 'Network', 'NTP', 'SNMP', 'SMTP', 'GPIO', 'GPS', and 'System Tools'. The 'Network' option is selected, and its sub-menu is open, showing 'eth0' highlighted with an orange box. Other menu items include 'Home', 'Administration', 'Logs', 'Configuration', and 'RDS/RBDS'. The 'AXEL TECHNOLOGY' logo is visible at the bottom.

To confirm the process you have to connect to the new set IP and press **Confirm Network Configuration** from: [Setup](#) > [Network](#) > [eth0](#)



Confirm Network Configuration: If you do not confirm the new configuration within 5 minutes, the last changes are not implemented. Then you have to reconnect by using the **old IP address** and [Send Network configuration](#) again. After the confirmation of the new IP address you will see the following message:



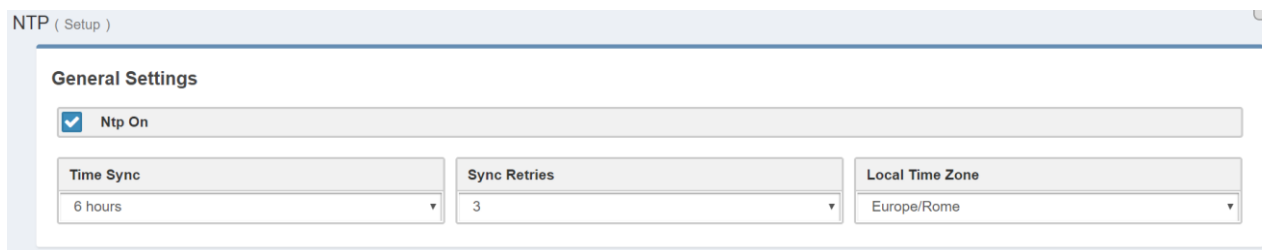
3.2.3 NTP

Network Time Protocol. This section contains all the settings related to **NTP** features. It is, in fact, possible to connect the device to an **NTP** server and in this way the device will synchronize its own date and time with the server.

You can set up to three **NTP** servers. In case there are problems on the first server, the device goes to the second and so on up to the third.

In Setup > **NTP** you have all the settings related with the **Network Time Protocol**. Here you can synchronize the device with different desired **NTP** Servers clock time to start with them the data packet exchange.

GENERAL SETTINGS

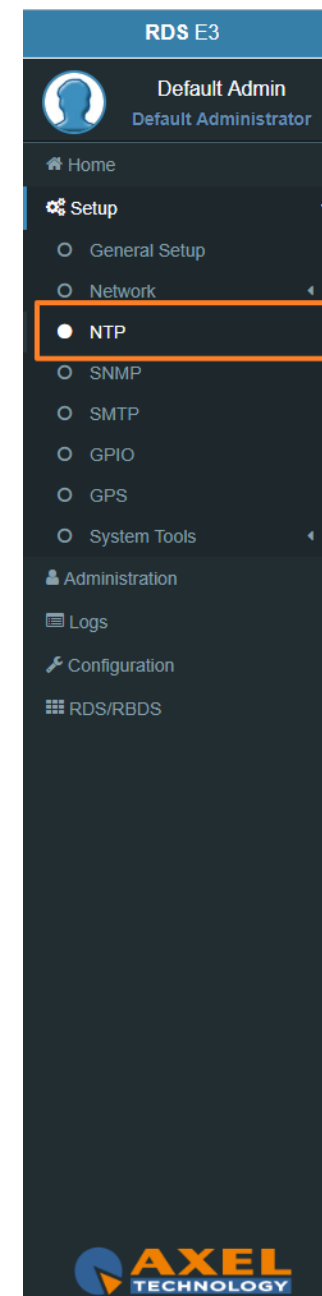


NTP ON: click on the checkbox to enable/disable the Sync with the desired NTP server

TYME SYNCH: decide the sync interval

SYNC RETRIES: decide the sync retries in case of failure

LOCAL TIME ZONE: select the Local Time Zone related with the geographical device position.



PRIMARY NTP SERVER

Primary NTP Server	
IP Address / Url 0.pool.ntp.org	NTP Version Auto
Additional #1 NTP Server	
IP Address / Url 1.pool.ntp.org	NTP Version Auto
Additional #2 NTP Server	
IP Address / Url 2.pool.ntp.org	NTP Version Auto

IP ADDRESS / URL: type the IP/URL of the desired primary NTP server to synchronize the device clock with the server clock.

NTP VERSION(AUTO, V1, V2, V3, V4): select the desired NTP version.

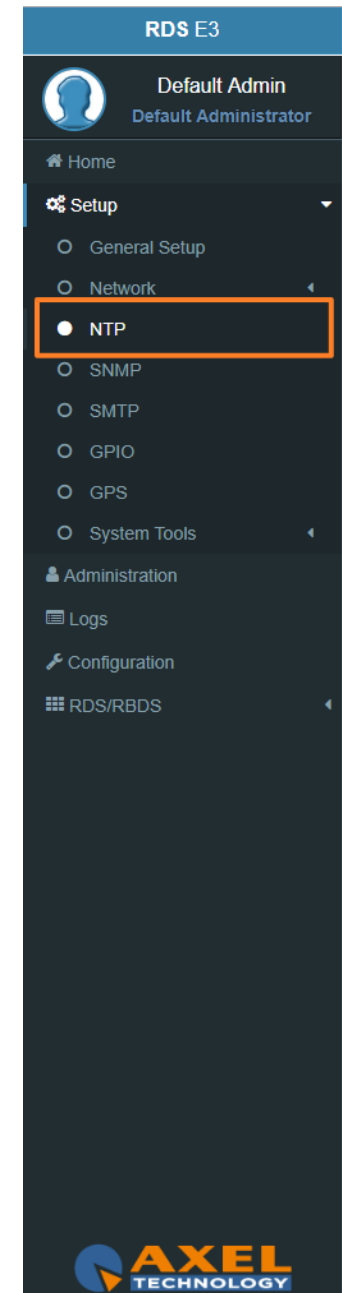
NTP Events

NTP Events	
<input checked="" type="checkbox"/> masked	NTP Warning
<input checked="" type="checkbox"/> masked	NTP Alarm

Masked/Unmasked NTP Warning: the warning control records in logs section a connection problem with one or more DNS Servers. Select Mask to enable the record or Unmask to disable it

Masked/Unmasked NTP Alarm: the Alarm control records in logs section a connection problem with all DNS Servers. Select Mask to enable the record or Unmask to disable for it.

The event section is useful to mask/unmask problems detection with the connection between the device and the NTP Servers.

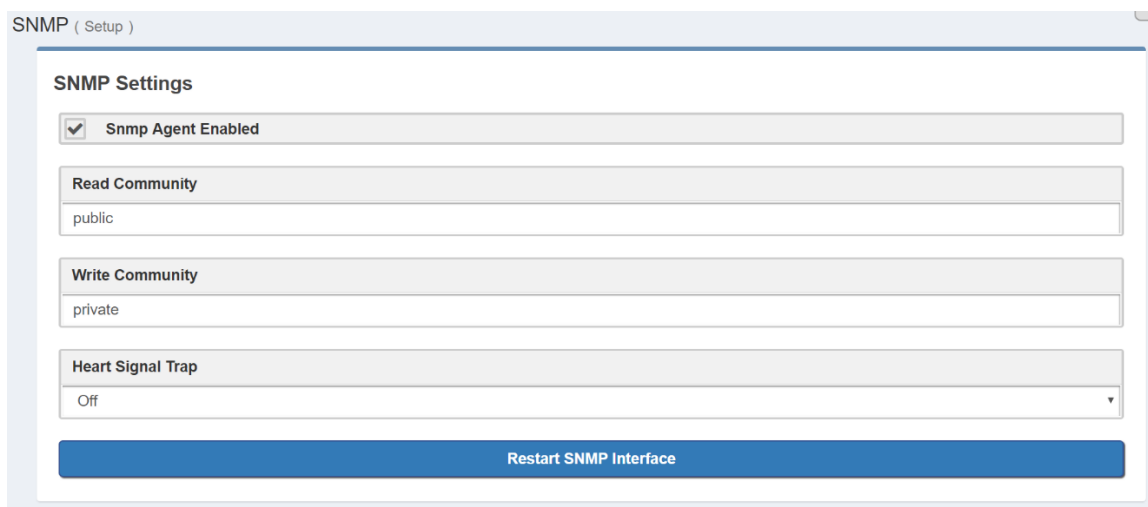


3.2.4 SNMP

The **Simple Network Management Protocol** (SNMP) is used mostly in large networks to monitor network attached devices for conditions that warrant administrative attention. The RDS encoder supports SNMP.

You can setup all parameters related with the **Simple Network Management Protocol**. Here you can define parameters for different **NMS** (Network Management Server) for the network and trap management.

SNMP Settings



SNMP (Setup)

SNMP Settings

Snmp Agent Enabled

Read Community
public

Write Community
private

Heart Signal Trap
Off

Restart SNMP Interface

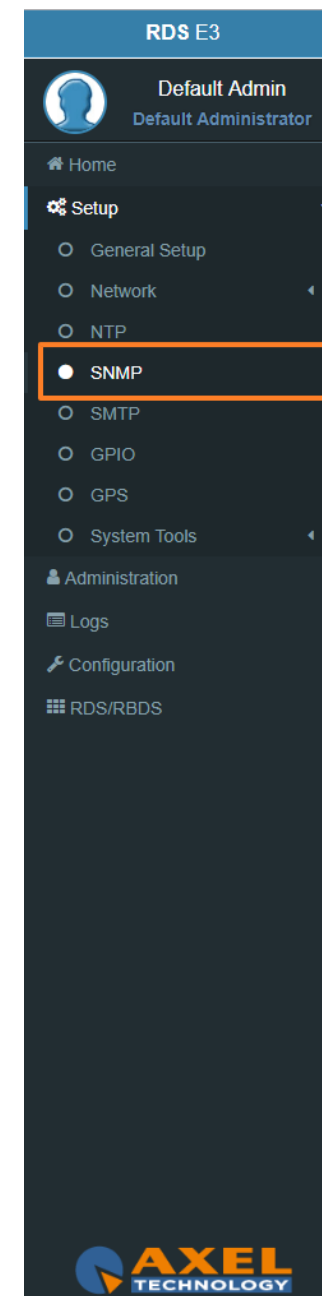
SNMP Agent Enabled: click on this checkbox to enable or disable the SNMP agent for the warning or alarm traps.

Read Community: it is set on “public” by default. It is the Community String related to the SNMP requests from NMS to the device. If you want to protect your data change it here and in the NMS.

Public/Private: it is set on “private” by default. It is the Community String related to the SNMP device settings from NMS to the device. To have a better protection in the Write Community change the Community String here and in the NMS.

Heart Signal Trap: select between ON/OFF if you want to enable/disable the device Heartbeat signal trap.

Restart SNMP Interface: This command restarts the SNMP interface.



3.2.5 SMTP

Here can setup all parameters related to the **Simple Mail Transfer Protocol**. you can define parameters for different **SMTP** servers for the e-mail notification on the device functioning.

SMTP Settings

SMTP Settings

SMTP On

Delivery Interval
 6 hours

Sender E-Mail Name RDSE3	Sender Display Address noreply@mail.com	Sender E-Mail Subject [RDSE3] Periodic Report Message
-----------------------------	--	--

SMTP Receivers

Receiver #1 -	Receiver #2 -
Receiver #3 -	Receiver #4 -

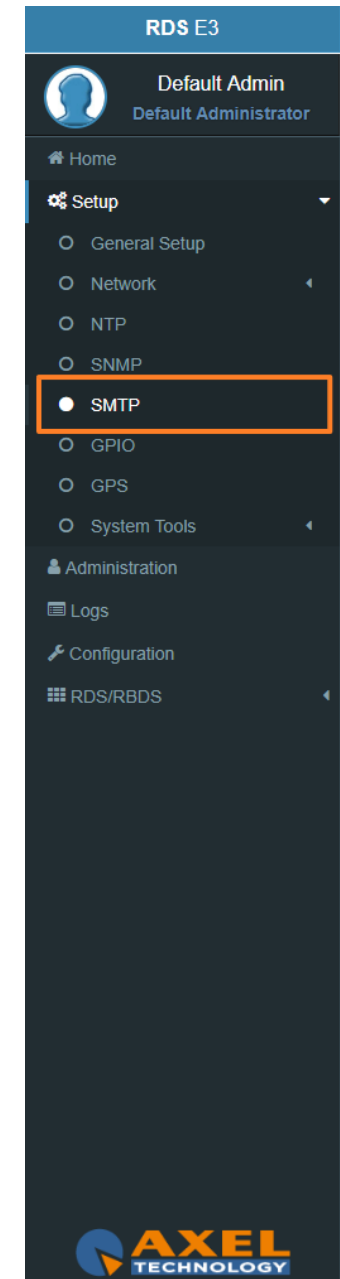
SMTP On: Click on the checkbox to activate/deactivate the SMTP service

Delivery Interval: Select the desired Delay Interval for the Email Notifications. If **SMTP On** is checked you will have Email Notifications every Delivery Interval.

Sender E-Mail Name: Type here a standard Sender E-mail Name

Sender Display Address: Type here the default Sender Display Address. Receivers will read this sender address.

Sender E-Mail Subject: Email Receivers will read this E-Mail Subject.



MAIN SMTP Server Settings

Main SMTP Server Settings

Description

Server IP Address / Url Port
25

Security Authorization Method
None None

Username Password

Description: type here a short description for the desired main SMTP Server

Server IP Address / Url: the IP Address / Url of your SMTP server domain

Port: TCP port for the communication

Security protocol: Network Security protocol

Authorization Method: choose the desired method from the list

Username: email username

Password: email password

RDS E3

Default Admin

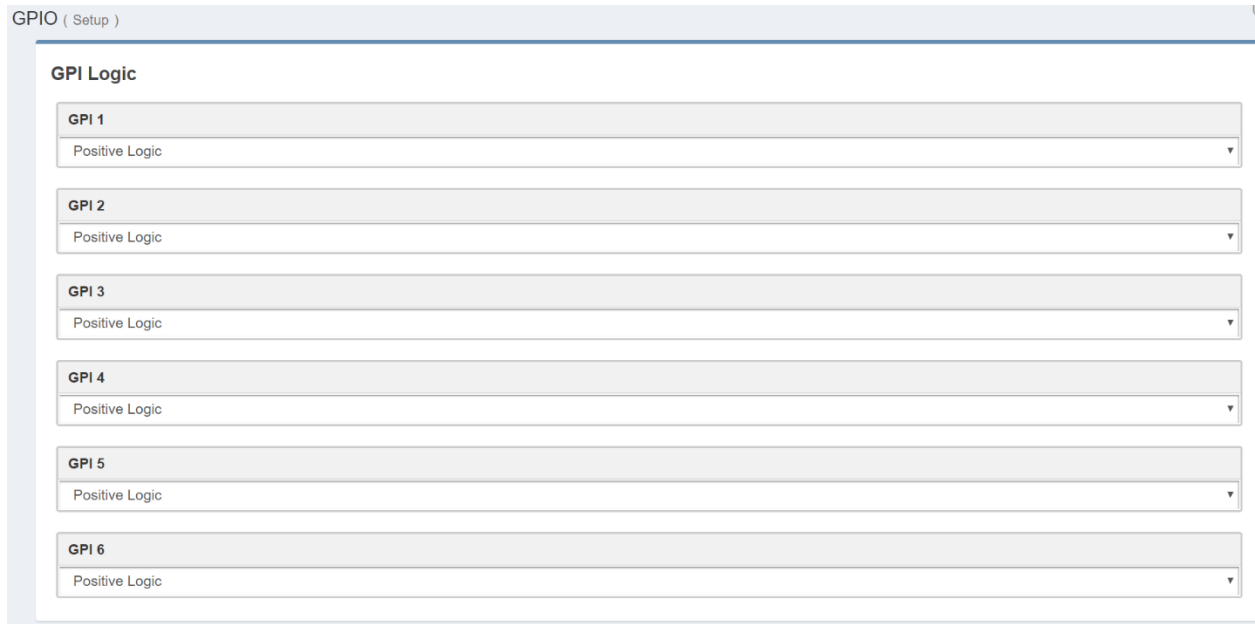
Default Administrator

- Home
- Setup
 - General Setup
 - Network
 - NTP
 - SNMP
 - SMTP
 - GPIO
 - GPS
 - System Tools
- Administration
- Logs
- Configuration
- RDS/RBDS

3.2.6 GPIO

In [Setup > GPIO](#) you can setup all parameters related with the General Purpose **Input/Output**. Here you can define the behaviour of different **GPI** or **GPO** devices.

GPI Logic

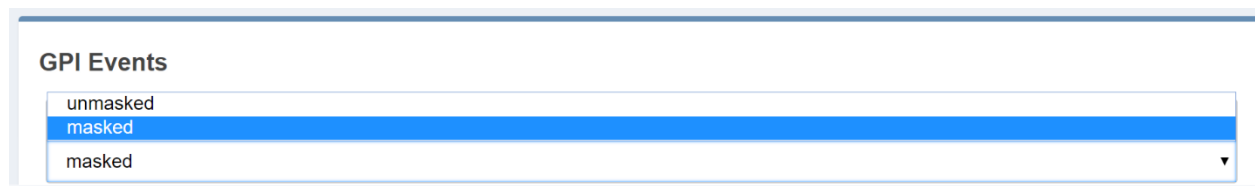


The screenshot shows the 'GPIO (Setup)' configuration page. Under the 'GPI Logic' section, there are six rows, each representing a GPI pin (GPI 1 to GPI 6). Each row contains a dropdown menu currently set to 'Positive Logic'.

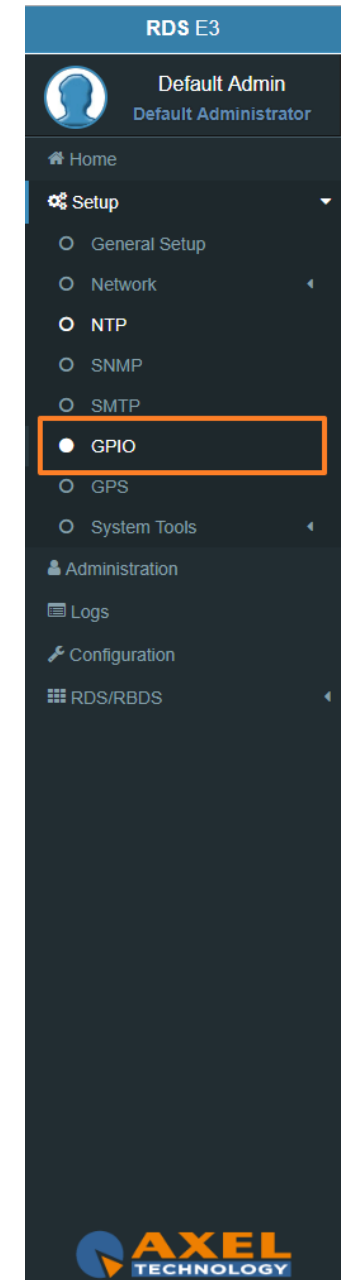
Positive Logic: the event is logged when the GPI circuit is closed.

Negative Logic: the event is logged when the GPI circuit is opened.

GPI Events: select masked but the GPI in action. Unmasked to not in action it.

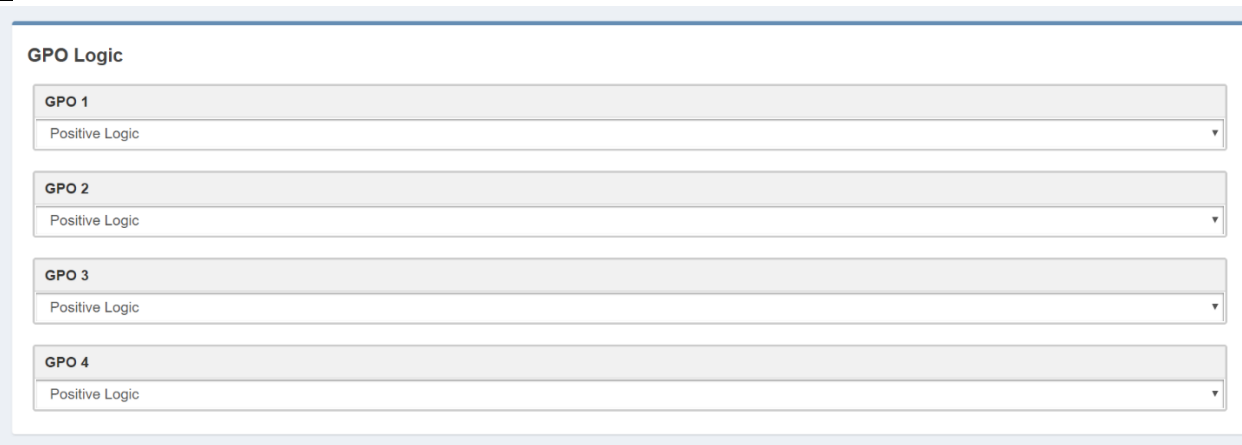


The screenshot shows a dropdown menu titled 'GPI Events'. The menu is open, showing three options: 'unmasked', 'masked', and 'masked'. The second 'masked' option is highlighted in blue.



The screenshot shows the RDS E3 user interface. At the top, it says 'RDS E3' and 'Default Admin Default Administrator'. Below this is a navigation menu with the following items: Home, Setup, General Setup, Network, NTP, SNMP, SMTP, GPIO (highlighted with an orange box), GPS, System Tools, Administration, Logs, Configuration, and RDS/RBDS. At the bottom right, there is an 'AXEL TECHNOLOGY' logo.

GPO LOGIC

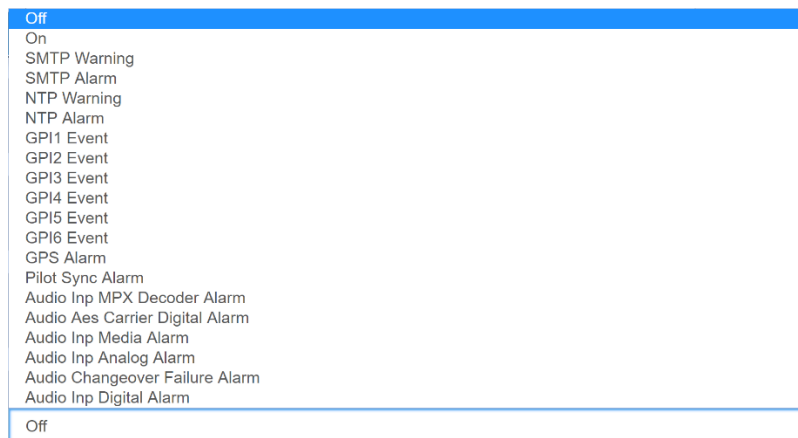


Positive Logic: the generated event is the closing of the GPO circuit.

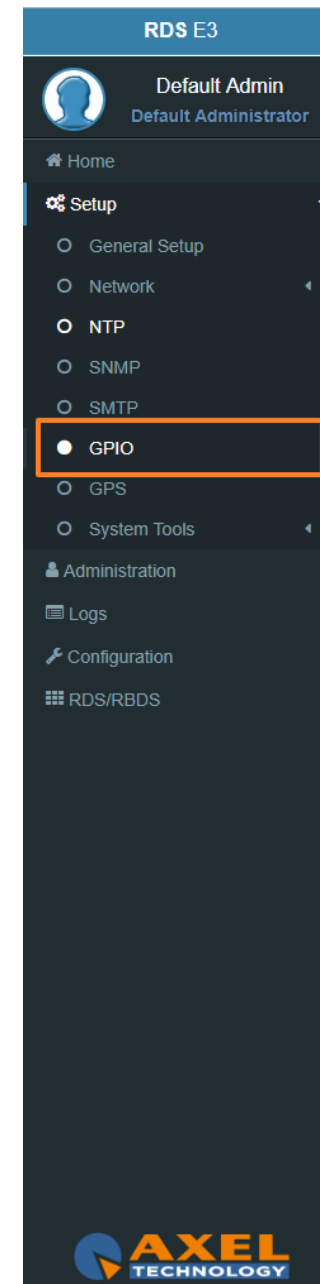
Negative Logic: negative logic: the generated event is the opening of the GPO circuit.

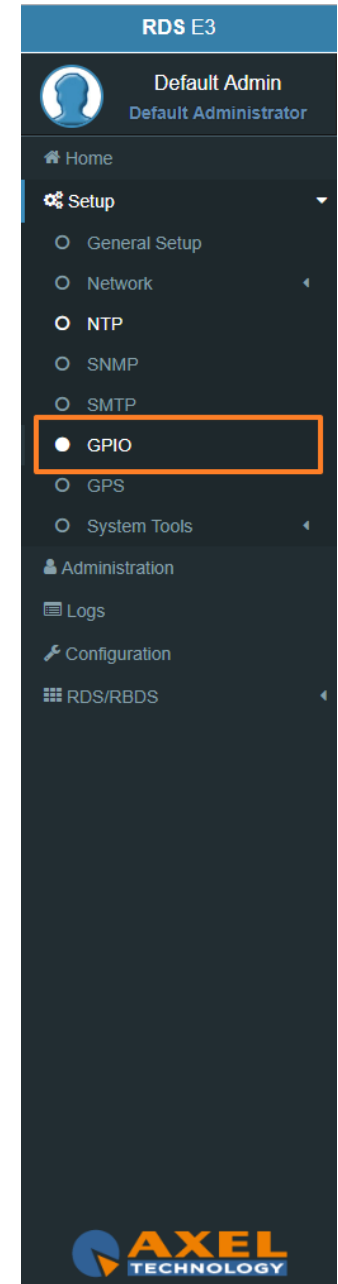
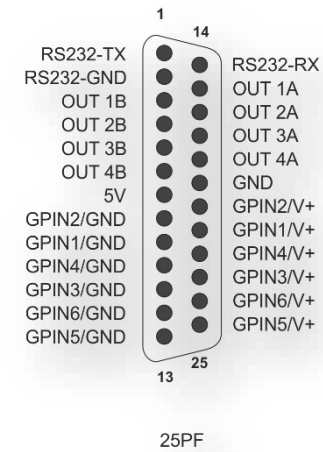
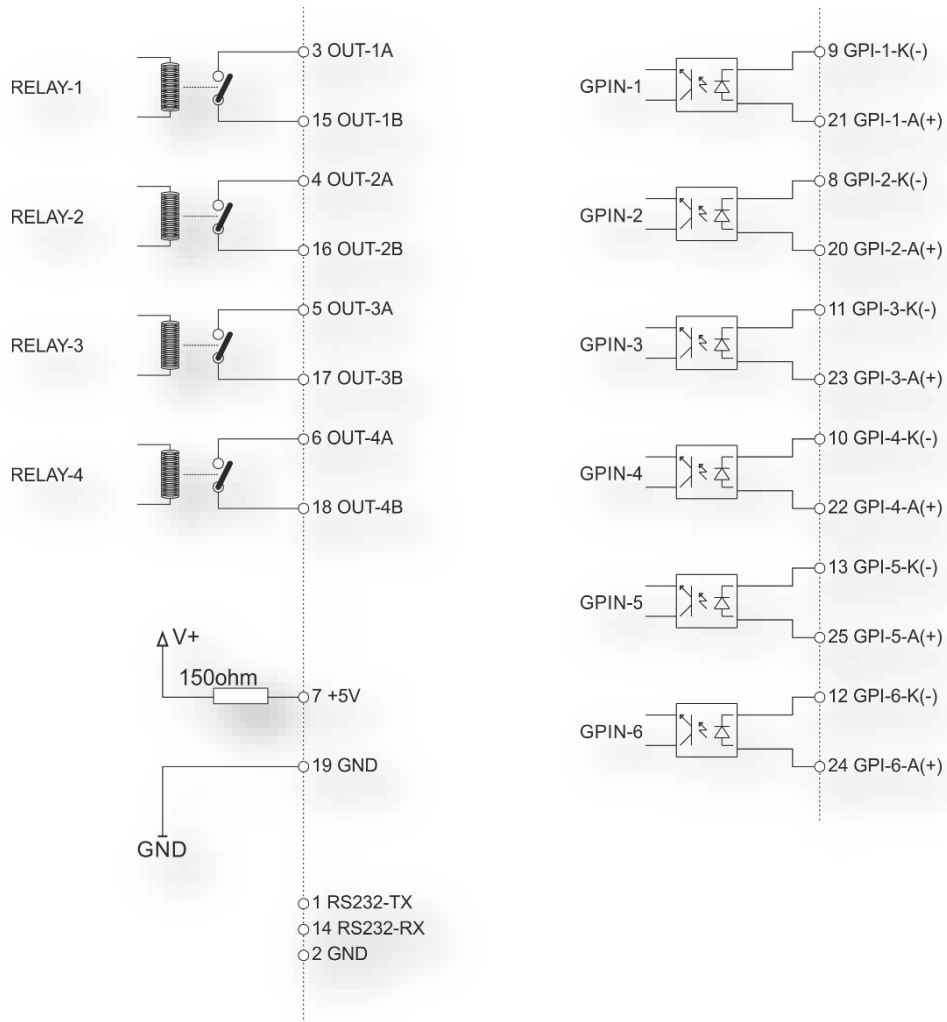
In **GPO Event Notifications** you can decide to root to the GPO device: no Event Source(OFF), to root all Event Sources(ON), to root a selected Event Source (in example: NTP Alarm).

in every GPO menu select the event source that you want to listen, as shown in the following picture:



Pilot Sync Alarm: alarm starting when the frequency of the encoded RDS/RBDS signal is out of sync with an available external pilot(analogue MPX frequency / digital frequency by the SYNC/MPX inputs).

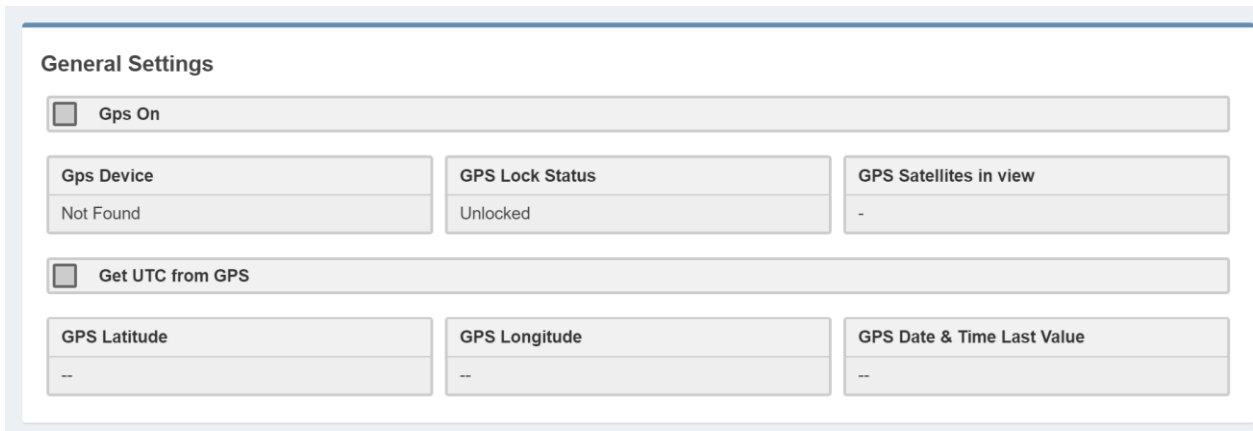




3.2.7 GPS

In [Setup > GPS](#) you can setup all parameters related to the **Global Positioning System**. Here you can define parameters for the desired **GPS** device for the satellite geolocation.

General Settings



The screenshot shows the 'General Settings' section for GPS configuration. It includes a 'Gps On' checkbox, a 'Gps Device' field with the value 'Not Found', a 'GPS Lock Status' field with the value 'Unlocked', and a 'GPS Satellites in view' field with the value '-'. Below these are a 'Get UTC from GPS' checkbox, a 'GPS Latitude' field with the value '--', a 'GPS Longitude' field with the value '--', and a 'GPS Date & Time Last Value' field with the value '--'.

Gps On: Enable/Disable the GPS device

Gps Device: Name of the GPS device connected

GPS Lock Status: Lock/Unlock the GPS status

GPS Satellites in view: Satellites Number in view

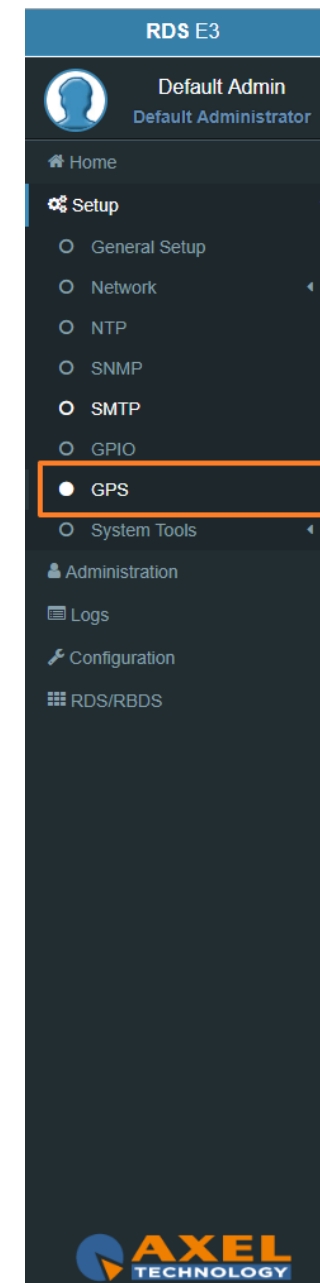
GPS Latitude: Type here the Latitude coordinate. If GPS is turned on this value is automatically inserted

GPS Longitude: Type here the Longitude coordinate. If GPS is turned on this value is automatically inserted

GPS Date & Time Last Value: Type here the Date and Time. If **Get UTC from GPS** is enabled this value is automatically inserted

GPS Events

Masked/Unmasked GPS Alarm: the alarm control logs a connection problem with the GPS device. Select Masked to enable the log or Unmasked to disable it



The screenshot shows the RDS E3 administration interface. The top bar displays 'RDS E3' and 'Default Admin'. The left sidebar contains a navigation menu with the following items: Home, Setup (expanded), Administration, Logs, Configuration, and RDS/RBDS. The 'Setup' menu is expanded, showing sub-items: General Setup, Network, NTP, SNMP, SMTP, GPIO, GPS (highlighted with an orange box), and System Tools. The 'GPS' item is selected, indicating the current page.

3.2.8 SYSTEM TOOLS

3.2.8.1 UPDATES

LOAD A NEW FIRMWARE FILE

To load a new firmware file inside the device you have to connect with it through an FTP Client (in this example we use Filezilla). The device must be reachable.

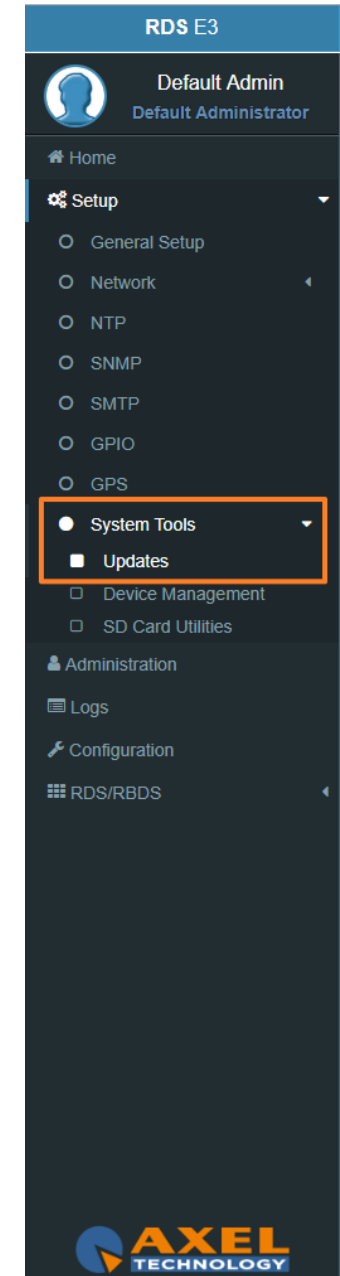
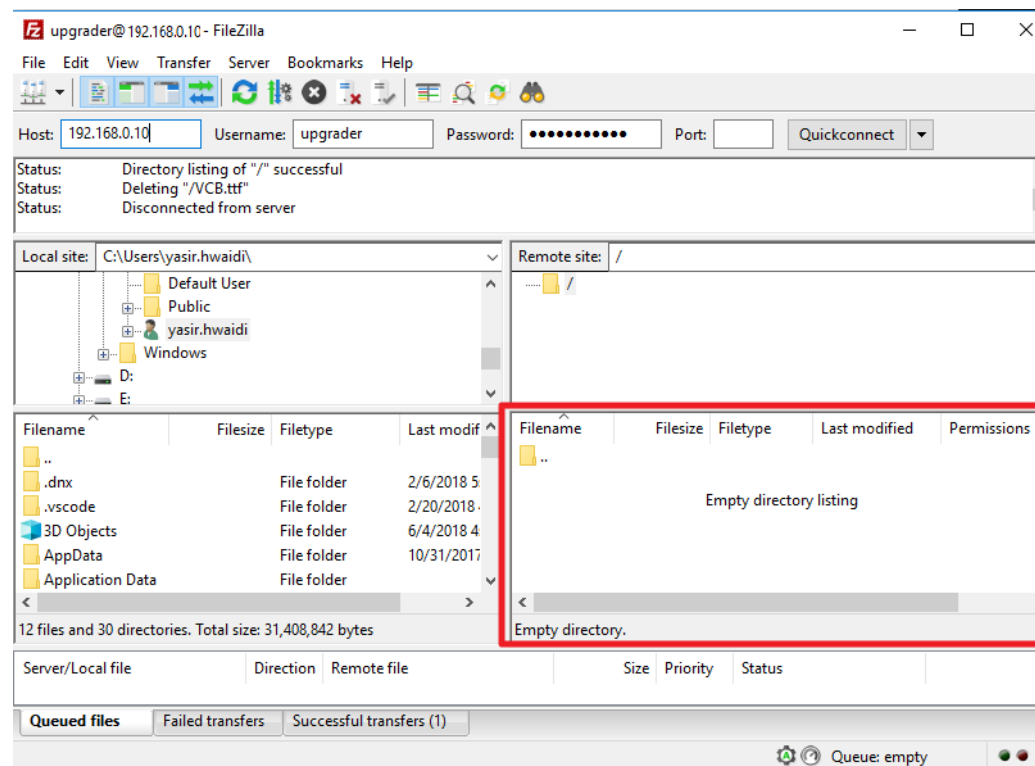
In the following line you can find for the FTP Credentials useful for the connections:

Host: **device IP** XXX.XXX.XXX.XXX User: **upgrader** Password: **ax-upgrader**

The FTP client will connect directly to the right upgrader folder (it will not be possible to navigate in different folders).

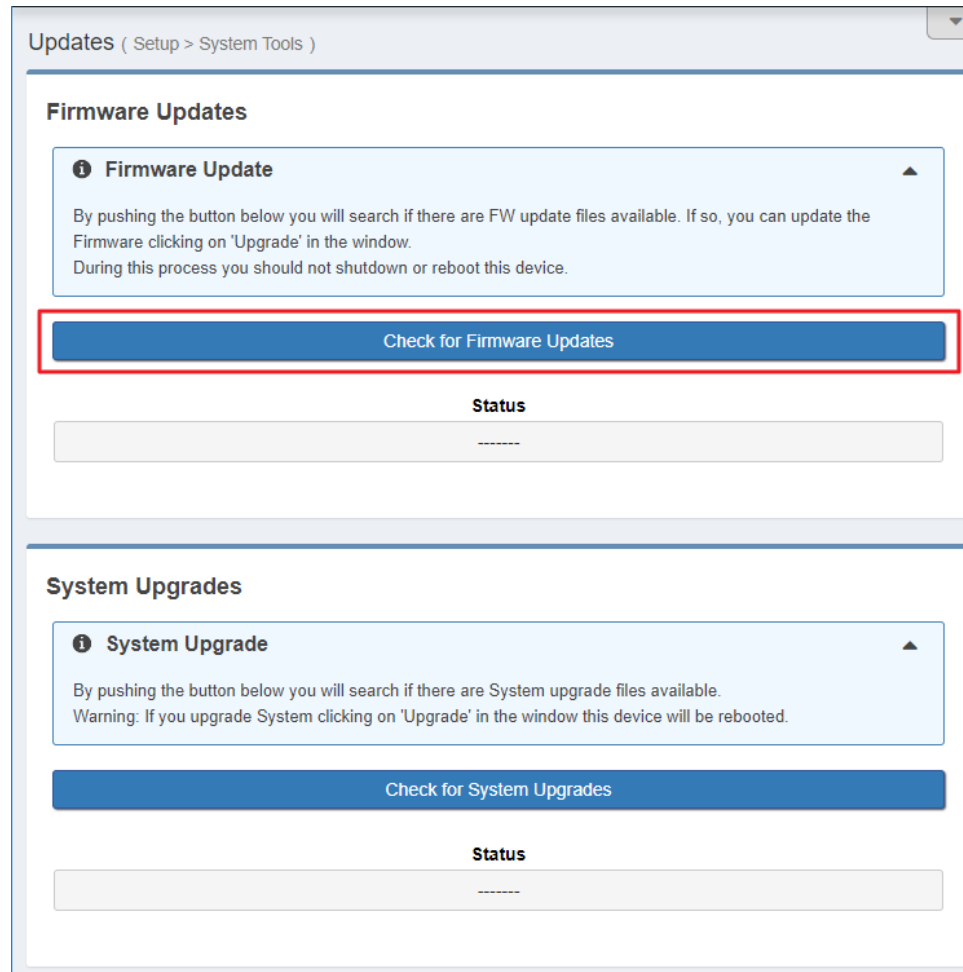
Paste the new firmware file in the red area as shown in the picture by drag and drop.

N.B: The update file must be provided by **AXEL TECHNOLOGY**.



FIRMWARE UPDATES

After uploading the update file into the **RDS** by the FTP Client. Now we have to go to the RDS web interface to login in and following this steps **SETUP > SYSTEM TOOLS > UPDATES**. By pushing the **Check for Firmware Updates** you will search if there is an FW update file available. If so, you can update the Firmware clicking on '**Update**' in the window that will appear. During this process, you should not shutdown or reboot this device. When it is ready it will **REBOOT** the **RDS** automatically. Finally, it will be ready to use.



Updates (Setup > System Tools)

Firmware Updates

Firmware Update

By pushing the button below you will search if there are FW update files available. If so, you can update the Firmware clicking on 'Upgrade' in the window.
During this process you should not shutdown or reboot this device.

Check for Firmware Updates

Status

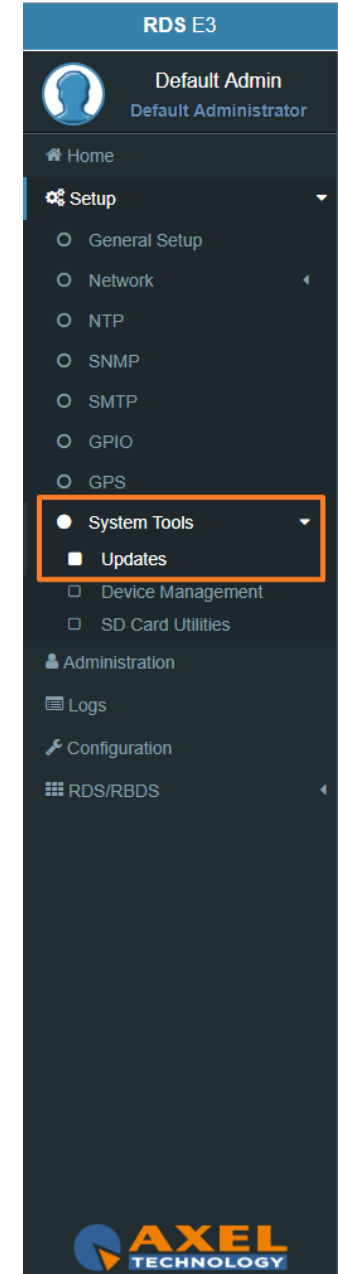
System Upgrades

System Upgrade

By pushing the button below you will search if there are System upgrade files available.
Warning: If you upgrade System clicking on 'Upgrade' in the window this device will be rebooted.

Check for System Upgrades

Status



RDS E3

Default Admin
Default Administrator

- Home
- Setup
 - General Setup
 - Network
 - NTP
 - SNMP
 - SMTP
 - GPIO
 - GPS
- System Tools**
 - Updates**
 - Device Management
 - SD Card Utilities
- Administration
- Logs
- Configuration
- RDS/RBDS

AXEL TECHNOLOGY

LOAD A NEW SYSTEM UPGRADE FILE

To load a new system upgrade file inside the device you have to connect with it through an **FTP Client** (in this example we use Filezilla). The device must be reachable.

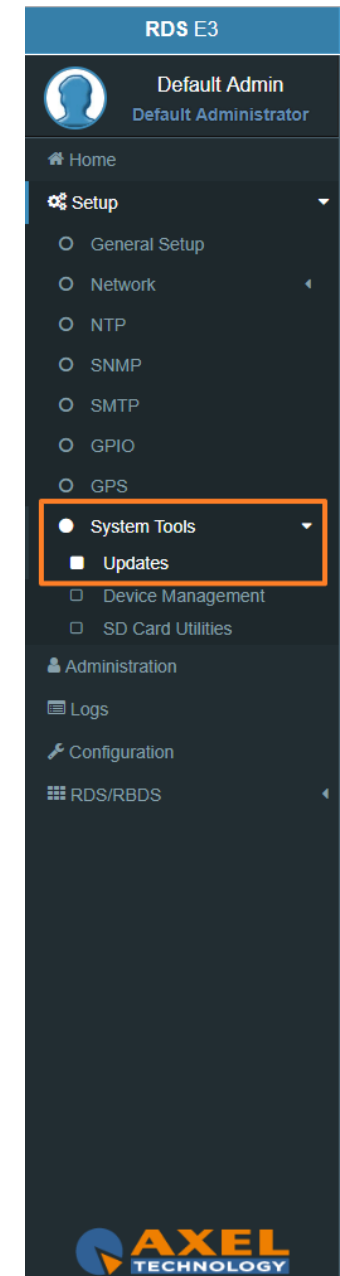
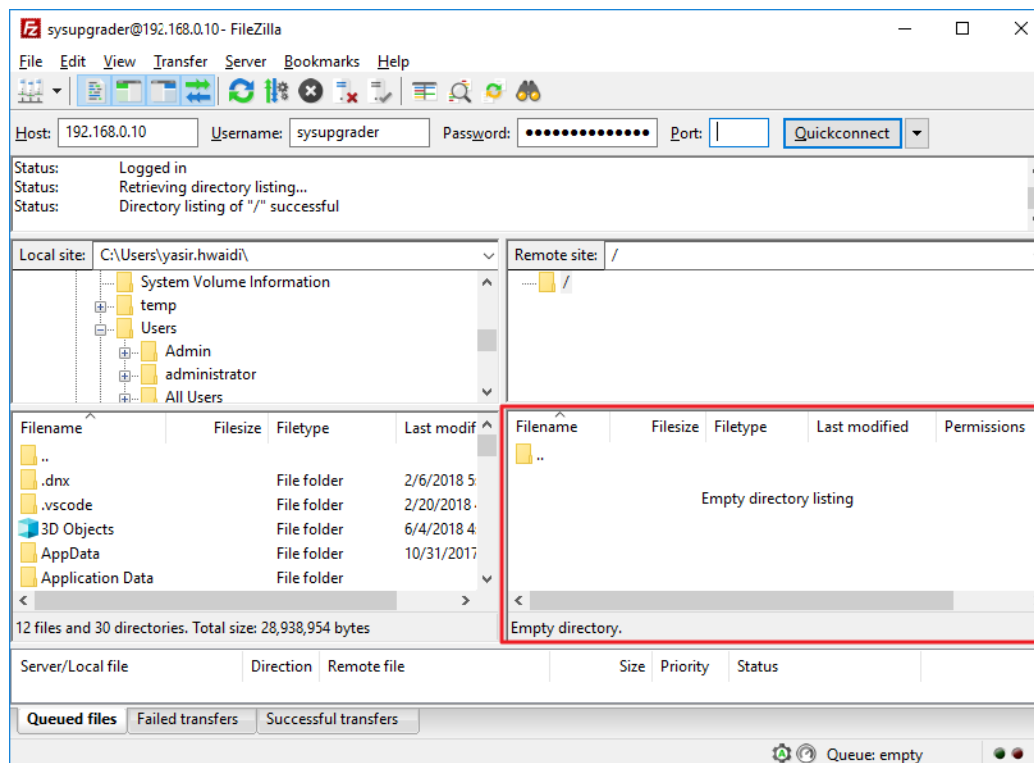
In the following line you can read for the FTP Credentials useful for the connections:

Host: **device IP XXX.XXX.XXX.XXX** User: **sysupgrader** Password: **ax-sysupgrader**

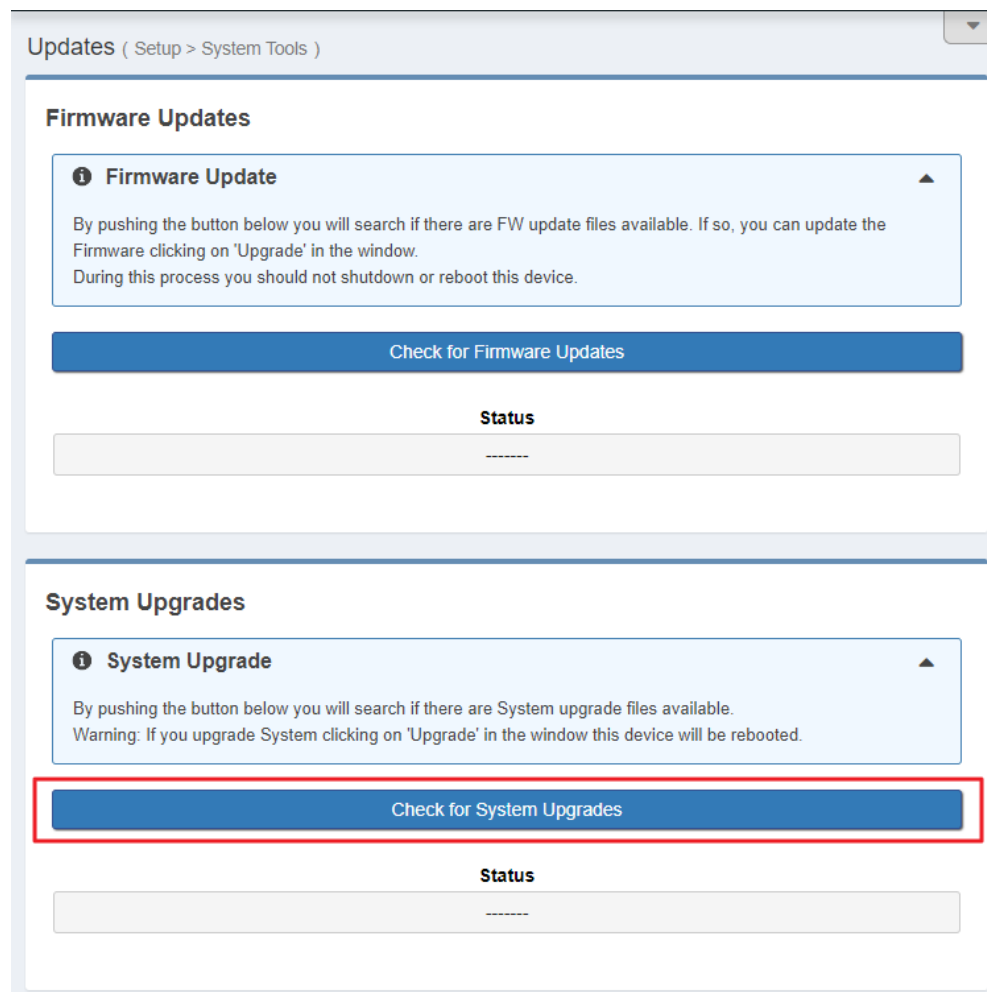
The FTP client will connect directly to the right upgrader folder (it will not be possible to navigate in different folders).

Paste the new firmware file “**SysUpgrade-XXX.tgz**” in the red area as shown in the picture by drag and drop.

N.B: The update file must be provided by **AXEL TECHNOLOGY**.



After uploading the system update file into the **RDS** by the FTP Client. Now we have to go to the RDS web interface to login in and following this steps [SETUP > SYSTEM TOOLS > UPDATES](#). By pushing the **Check for system Upgrades** you will search if there is an FW update file available. If so, you can update the system by clicking on '**Upgrade**' in the window that will appear. During this process, you should not shutdown or reboot this device. When it is ready it will **REBOOT** the **RDS** automatically. Finally, it will be ready to use.



Updates (Setup > System Tools)

Firmware Updates

Firmware Update

By pushing the button below you will search if there are FW update files available. If so, you can update the Firmware clicking on 'Upgrade' in the window.
During this process you should not shutdown or reboot this device.

Check for Firmware Updates

Status

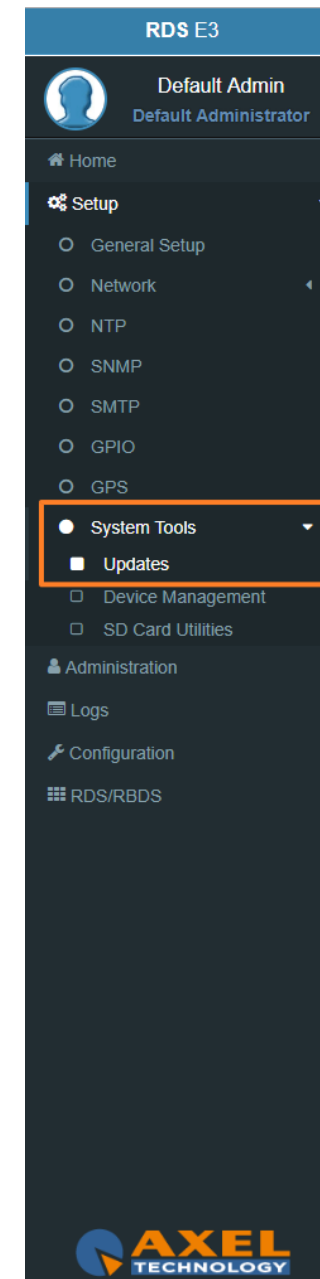
System Upgrades

System Upgrade

By pushing the button below you will search if there are System upgrade files available.
Warning: If you upgrade System clicking on 'Upgrade' in the window this device will be rebooted.

Check for System Upgrades

Status



RDS E3

Default Admin
Default Administrator

- Home
- Setup
 - General Setup
 - Network
 - NTP
 - SNMP
 - SMTP
 - GPIO
 - GPS
 - System Tools**
 - Updates**
 - Device Management
 - SD Card Utilities
- Administration
- Logs
- Configuration
- RDS/RBDS

AXEL TECHNOLOGY

3.2.8.2 DEVICE MANAGEMENT

A. Reboot Device

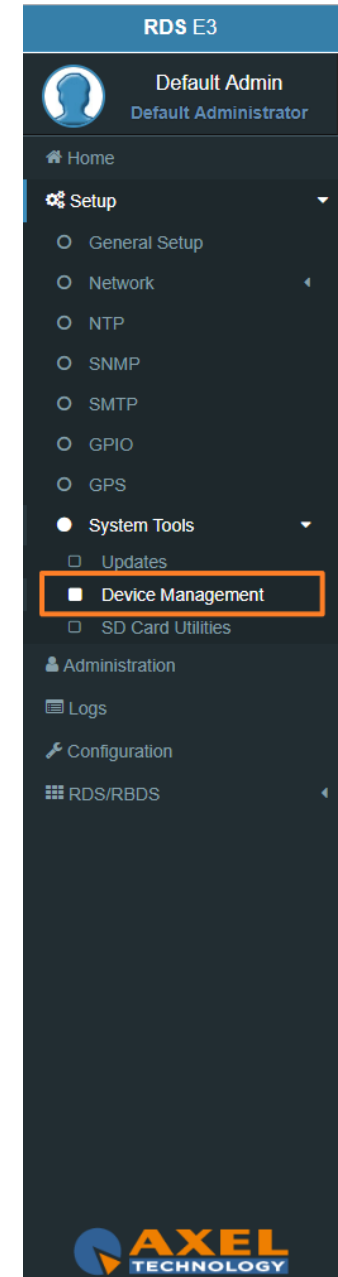
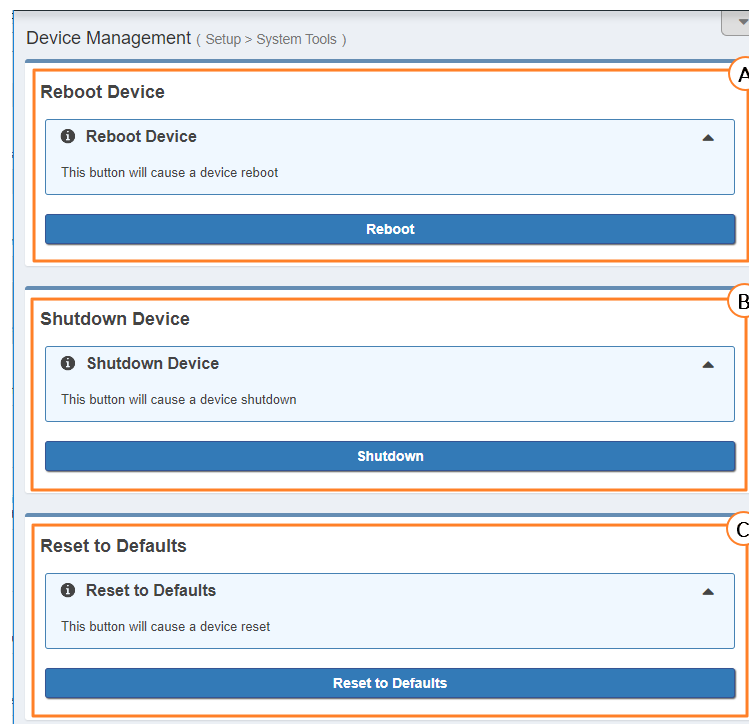
This button will cause a device reboot.

B. Shutdown Device

This button will cause a device shutdown.

C. Reset to Defaults

This button will cause a device reset.



3.2.8.3 SD CARD UTILITIES

SD STATUS

SD Found	SD Structure
No	Missing SD

SD Found: If an external SD is found, this status will be OK, otherwise to use the tools below you need to insert (or change) an SD card in the external back slot.

SD Structure: The external SD card must be formatted and prepared with a particular folder tree. If this status is not OK, you need to format & prepare it using the format button.

FORMAT AND PREPARE

This procedure will format the external SD card and prepares it to receive data.

CLONING TOOLS

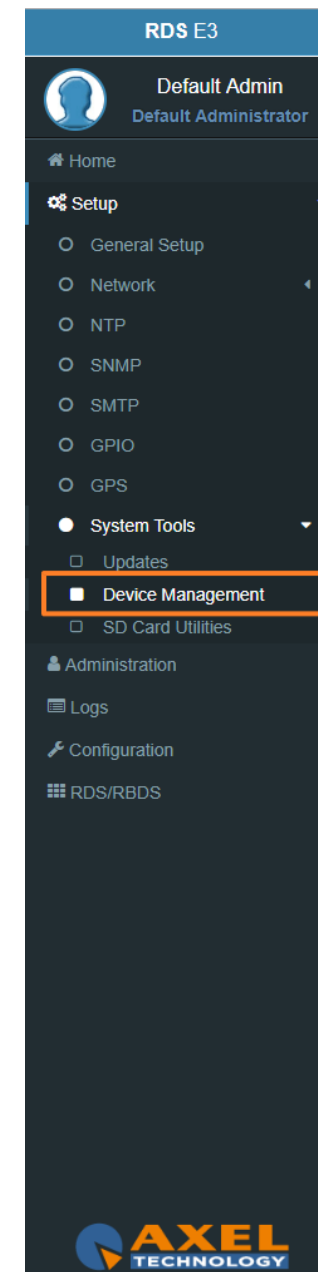
Clone to SD	
Status	

<input type="button" value="Cloning Device"/>	
Clone from SD	
Status	

Clone ro SD: This procedure will create a clone data structure on the external SD card.

Clone from SD: This procedure will create a clone data structure from the external SD card.

Important: System will be offline for a few minutes.



The screenshot shows the RDS E3 web interface. At the top, it says 'RDS E3' and 'Default Admin Default Administrator'. The navigation menu on the left includes: Home, Setup (with sub-items: General Setup, Network, NTP, SNMP, SMTP, GPIO, GPS), System Tools (with sub-items: Updates, Device Management, SD Card Utilities), Administration, Logs, Configuration, and RDS/RBDS. The 'Device Management' option is highlighted with a red box.

3.3 ADMINISTRATION

In Administration section, you can read, manage all the users and you can set their access permissions to the device. This section can be managed only by the Admin users.

Users List

Axel Technology - Administrator

Tester 1 - Super User



Selected user

Non selected user

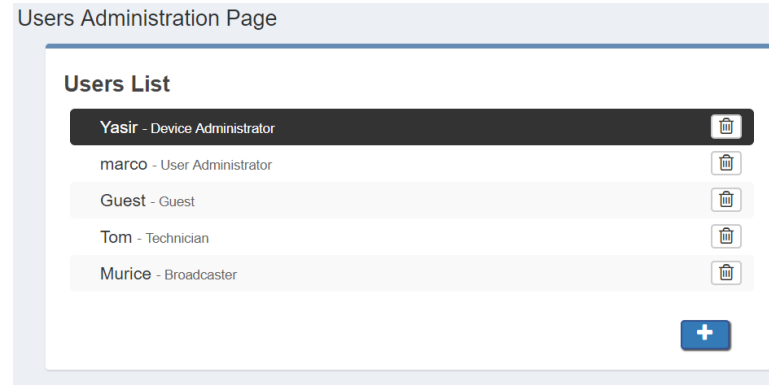
remove button



confirm the selected user removal



add a new User



User Details (user name)

Full Name: User Name

E-Mail: user email

User Class: user class, here you can decide user permissions.



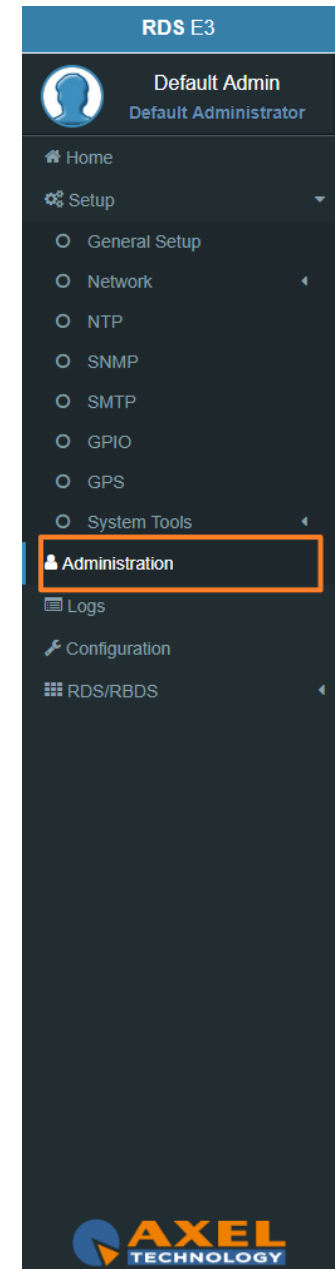
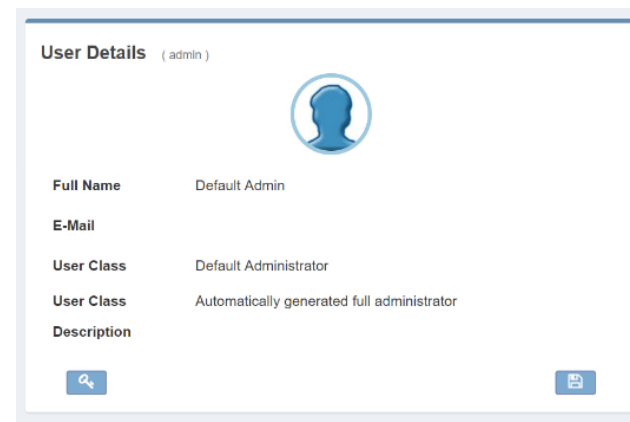
Discard Changes from the selected user



Change the password for the selected user



Save Changes for the selected user



3.3.1 USER CLASS – USER RIGHTS TO LOGIN THE SYSTEM

Full Administrator

The Full Administrator manages all user profiles, accesses all pages (except the calibration).

Default Administrator (Default User): The default administrator is the default user of the device, it is under the Full Administrator category, but it has fixed access credentials (user: admin – pwd: admin). This user is visible only when the system has no other Full Administrators.

User Administrator

User Administrator. It manages the profiles of all users.

Device Administrator

Non-administrator user that accesses all pages (it does not access administration, calibration and some of the product nameplate data).

Technician

Technician is the one who controls all the hardware parameters of the machine and the control of information pages.

Broadcaster

It has full control only on information management pages and on the audio signal.

Guest/Reader

Guest accesses anywhere without being able to edit any parameter.

Below, a summary table with the list of product pages and access rights for each type of use:

Legend

RW: full access (read/write)

R: read only user


H: hidid page

Page	Full Admin	User Admin	Device Admin	Technician	Broadcaster	Guest
Home	R	R	R	R	R	R
General Setup	RW	R	RW	RW	R	R
Network	RW	R	RW	RW	R	R
NTP	RW	R	RW	RW	R	R
SNMP	RW	R	RW	RW	R	R
SMTP	RW	R	RW	RW	R	R
GPIO	RW	R	RW	RW	R	R
GPS	RW	R	RW	RW	R	R
Updates	RW	R	RW	R	R	R
Device Management	RW	R	RW	R	R	R
SD Card Utilities	RW	R	RW	R	R	R
Administration	RW	RW	H	H	H	H
Logs	RW	RW	RW	RW	RW	R
Logs (Debug)	H	H	H	H	H	H
Configuration	RW	R	RW	RW	RW	R
Quick Rds Setup	RW	R	RW	R	R	R
Serial Ports	RW	R	RW	RW	R	R
Tcp/Ip Ports	RW	R	RW	RW	R	R
UDP/SNMP Ports	RW	R	RW	RW	R	R
Uecp Addressing	RW	R	RW	RW	R	R
Rds Settings	RW	R	RW	RW	R	R
Real Time Clock	RW	R	RW	RW	R	R
Uecp Services	RW	R	RW	R	RW	R
Uecp Main PS	RW	R	RW	R	RW	R
Uecp Main AF	RW	R	RW	R	RW	R
Uecp Radiotext	RW	R	RW	R	RW	R
Uecp Eon PS	RW	R	RW	R	RW	R
Uecp Eon AF	RW	R	RW	R	RW	R
Extended Dataset	RW	R	RW	R	RW	R
Extended PS Name	RW	R	RW	R	RW	R
Extended Radiotext	RW	R	RW	R	RW	R
Extended TA & M/S	RW	R	RW	R	RW	R

Extended Pty&Pty	RW	R	RW	R	RW	R
RDS Blocks Analysis	R	R	R	R	R	R
Audio Input Sources: Analogic	RW	R	RW	RW	RW	R
Audio Input Sources: Digital	RW	R	RW	RW	RW	R
Audio Input Sources: Multimedia	RW	R	RW	RW	RW	R
Audio Input Sources: MPX Decoder	RW	R	RW	RW	RW	R
Audio Input Sources: Audio Generator	RW	R	RW	RW	RW	R
Audio Input Sources: Output Monitor	RW	R	RW	RW	RW	R
Audio Input: Changeover	RW	R	RW	RW	RW	R
Audio Input:Audio Analysis	RW	R	RW	RW	RW	R
Internal MPX Encoder	RW	R	RW	RW	RW	R
MPX Changeover: Delay	RW	R	RW	RW	RW	R
MPX Changeover: Source A	RW	R	RW	RW	RW	R
MPX Changeover: Source B	RW	R	RW	RW	RW	R
MPX Outputs	RW	R	RW	RW	RW	R
MPX Analysis	RW	R	RW	RW	RW	R
Multimedia Stramer: Encoder	RW	R	RW	RW	RW	R
Multimedia Stramer: Decoder	RW	R	RW	RW	RW	R
Multimedia Output	RW	R	RW	RW	RW	R

3.3.2 ADDING A NEW USER

To add a New User read the following steps:

1. Click on  Add a New User button
2. Type in the following fields the new user details:

User Name: New User name

Full Name: New User full name


E-Mail: New User email address

User Class: Select here the new user class

Password: New User Password

Password(Confirm): Password confirmation

New User Details



User Name



Full Name

E-Mail

User Class

Password

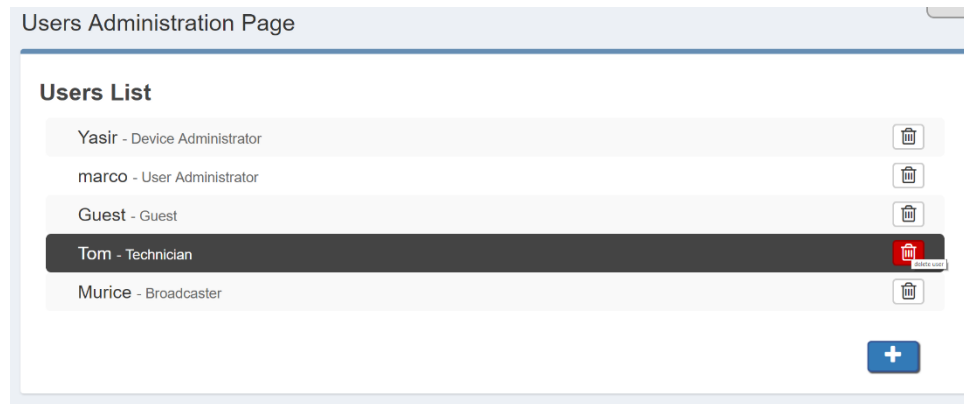
Password (Confirm)







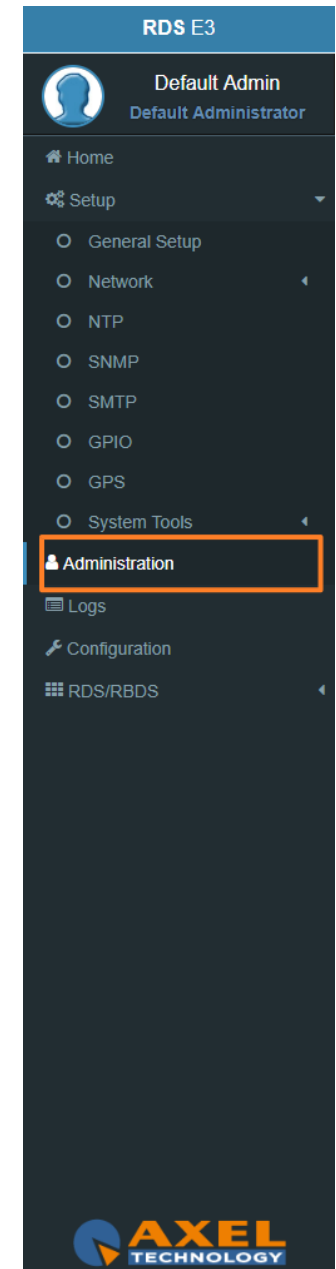
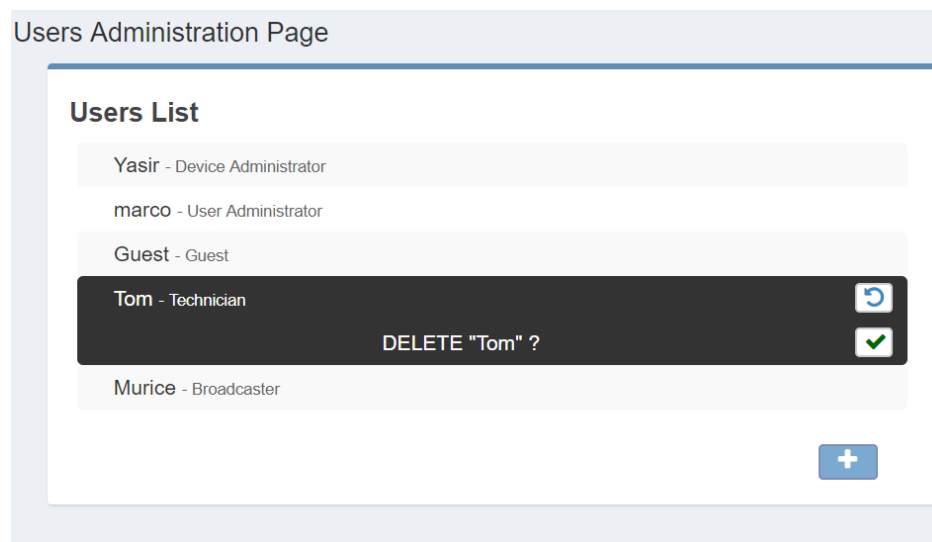
3. click on  to discard last changes or click on  to save for them.

3.3.3 REMOVING AN EXISTING USER.

To remove an Existing User read the following steps:



1. Move the mouse on the desired user.
2. Click on delete button. 
3. In the following mask Click on  to exit from the user deletion or click on  to confirm his deletion.



3.4 LOGS

In Logs section you can read for all the device Log list.

You can see four Logs Section. For every section you can do Refresh, Load All Logs from the device beginning, or you can Clear. All user classes can click some of these three buttons.

Logs - User Permissions:

Administrator, super user, technician, broadcaster, default administrator - Logs Read&Write, Logs Debug Hided)
 Super Technician(Logs Hided , Logs Debug Read&Write)
 Guest (Logs Read&Write, Logs Debug Hided)

3.4.1 USERS LOGS

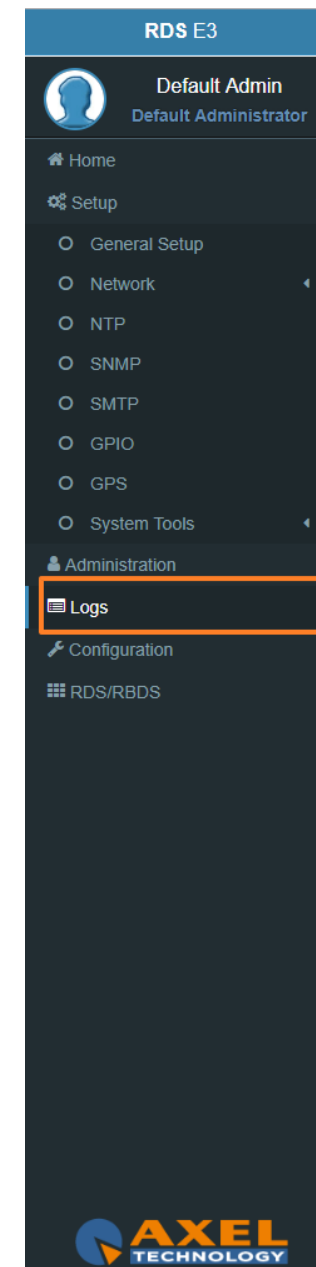
In this section you can read for the user logs changes or user logins or logouts.

3.4.2 EVENTS LOGS

In this section you can read for the logs of all detected events if they are **unmasked** in the related section.

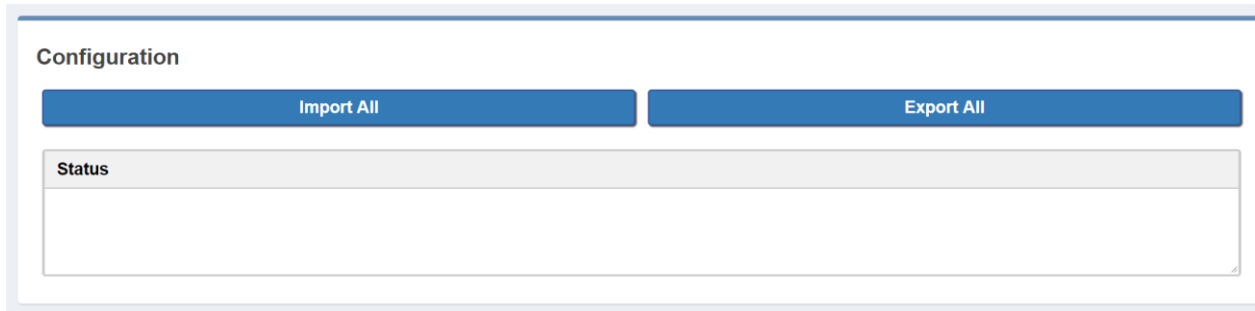
3.4.3 NOTIFICATIONS LOGS

In this section you can read for the logs of sent notifications or alarms.



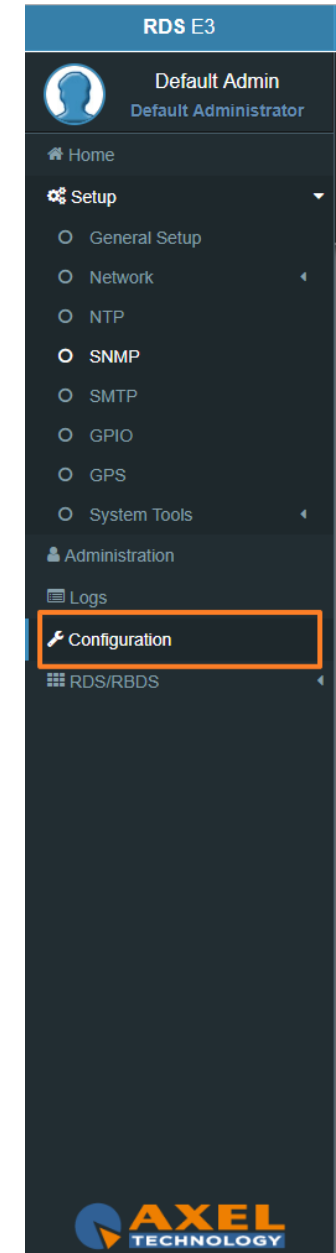
3.5 CONFIGURATION

3.5.1 IMPORT/EXPORT



Import: Import an existing .cnf file (json format) with all **RDS E3/E5** configs.

Export: Export a .cnf file (json format) with all **RDS E3/E5** configs in the desired folders.



3.6 RDS/RBDS

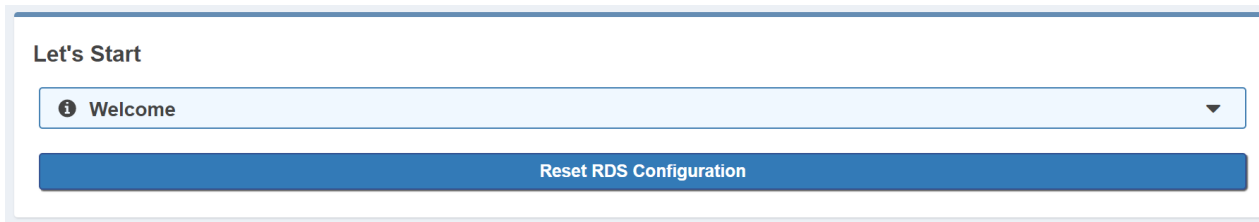
In RDS/RBDS section you can set all the parameters from RadioText, to AF, from EON to PTY/PTYN. You can also set all Extended RDS/RBDS parameters.

In this section you can setup all the parameters.

3.6.1 QUICK RDS SETUP

Here you can access to basic rds settings and make your radio come to life in a few simple steps.

To begin setup procedure, press the button below.

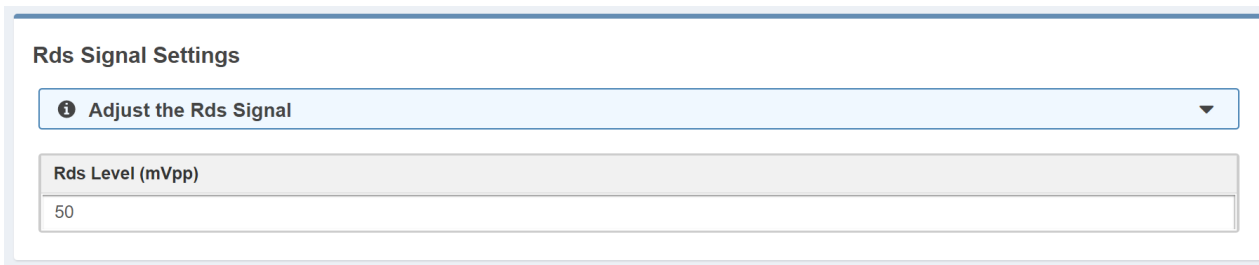


This operation resets and prepare Dataset 1 to broadcast services

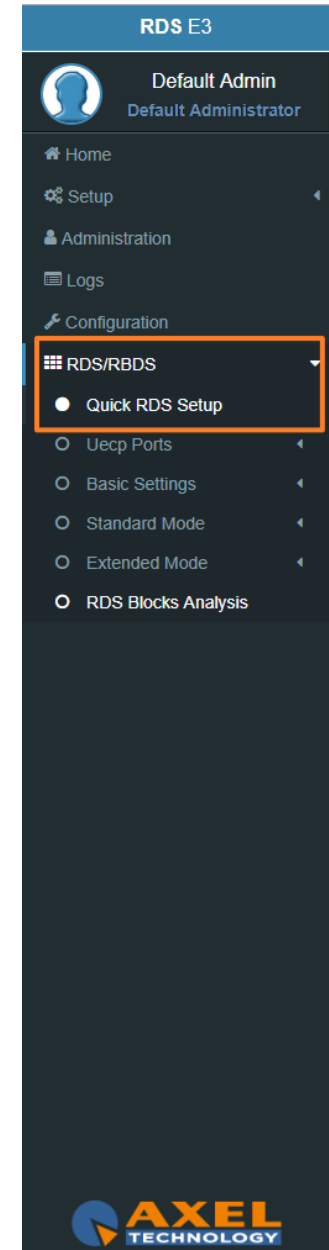
Rds Signal Settings

In this section you can choose Rds Level.

Shown value is suitable for most cases, but feel free to change it to get the best result.



For Rds Level acceptable values are from **0** up to **8100 mVpp**.



Program Services

Program Services

Give an identity to your Radio

PI 5000	PS PSNAME00
TP On	
PTY News	
Music/Speech Music	Decoder Information Stereo

PI: This is the most important datum. This 4 hexadecimal code is the unique identifier for your radio.

PS: Type here your Radio's name. Remember: you have at least 8 chars.

TP: If your radio carries out traffic infos set this to **On**.


PTY: Tells your listeners which type of (most of) programs you're transmitting. Is it a Classical Music radio? Do you prefer Rock? Here you can choose the best suit for your Radio.







Music/Speech: You can tell the receiver whether the current audio program is music (or speech) oriented.


Decoder Information: This allows you to indicate to the receiver if the decoder is stereo or mono. In every most of cases can be leaved on Stereo.

NOTE: These **PS** and **PTY** settings are the basic ones but this machine has extended powerful features. Please refer to documentation to discover the full features.

RDS E3

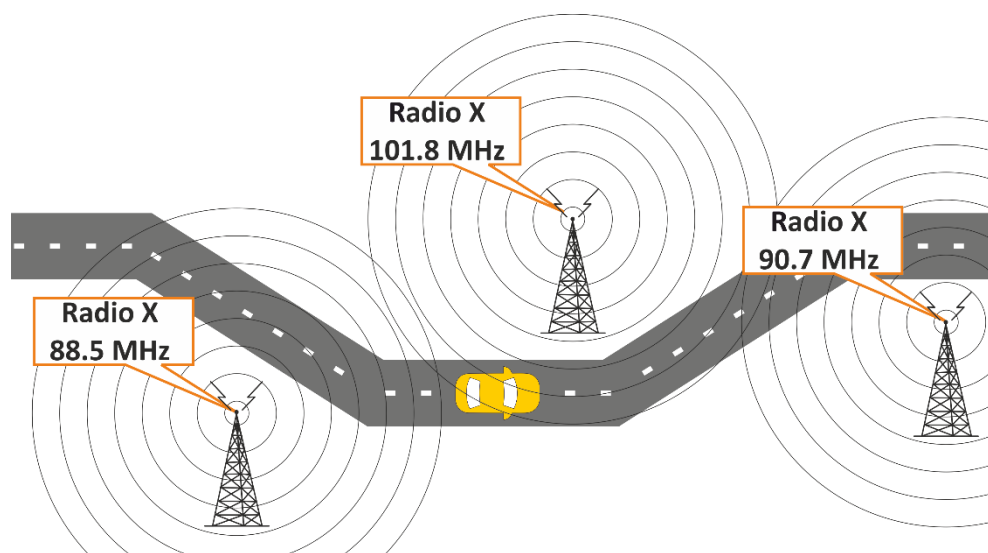
 **Default Admin**
Default Administrator

-  Home
-  Setup
-  Administration
-  Logs
-  Configuration
-  **RDS/RBDS**
 - Quick RDS Setup
 - Uecp Ports
 - Basic Settings
 - Standard Mode
 - Extended Mode
 - RDS Blocks Analysis

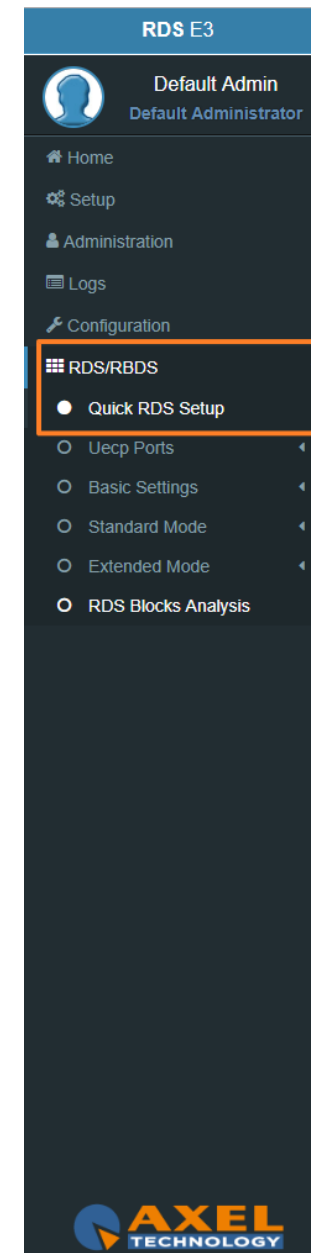


Alternative Frequencies

Alternative frequencies (**AF**) give the ability to automatically link the receiver to two or more transmitters carrying the same program material. The receiver will automatically switch from one transmitter to another when the signal quality becomes unacceptable. If you have a limited **AF** number (less than 25 frequencies) and you don't have particular needs you can choose **Method A**. You should use **Method B** whenever your transmitter and associated repeater stations exceeds 25 frequencies, or if you need to indicate frequencies which belong to different region which at times carry different programmes.



Let's make a couple of examples. First we want to set up a **method A** list where your station's Main frequency is on 100.0 MHz and the alternative frequencies are 98.4, 101.7 and 104.1 MHz. Press the button marked with a plus (+). This allows to edit a new **AF** list. From the combo box tagged '**Method**' choose '**A**'. In the 'Tuned. Freq.' edit type your main frequency always completed with decimal (100.0). In the **AF** list write down the alternative frequencies separated by a comma (98.4, 101.7, 104.1). Finally, press 'add' button. Now your list is inserted. You can see it in the frame above.



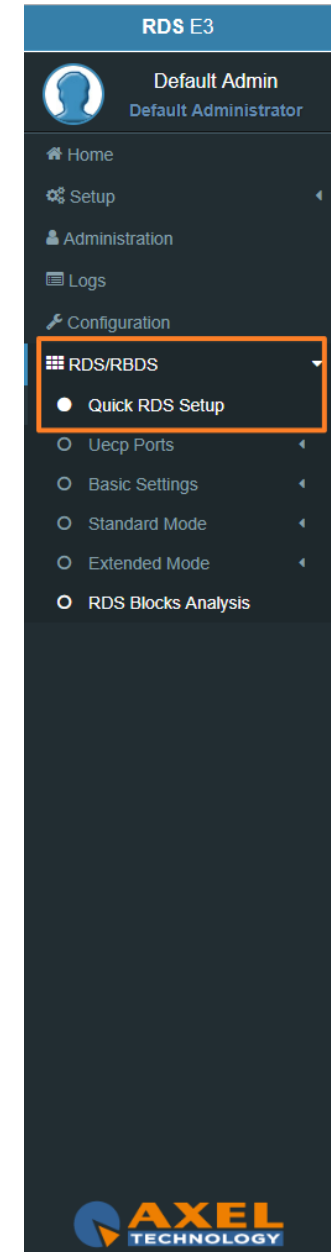
If you want to add a new list press again the **(+)** button and repeat each step.

If an alert appears check what you have typed (there can be a mistake). In doubt, refer to the manual.

Now we want to handle a more sophisticated network that shares the same audio program but differs in commercial advising from zone to zone. During the period when advertising is aired, the audio content will differ.


Let's say that the network has a Main frequency on 100.0 MHz and 6 alternative frequencies: 89.4, 90.7, 93.3, 99.0, 101.2, 106.1. We finally want to handle local advertising on geographical zones covered by the frequencies 90.7, 99.0 and 101.2 leaving the other with the main program.

- First of all, click on existing **method A AF**.
Please note that show data are copied down below into edit objects. This allows to re-edit them (if necessary) and update on-air data.
- Click the trash can button. This will erase the entire **AF list**.
- Press again the button marked with a plus **(+)**.
- From the combo '**Method**' choose '**B**'. In the 'Tuned. Freq.' edit type your main frequency always completed with decimal (100.0).
- In the **AF list** write down the alternative frequencies separated by a comma. Because 90.7, 99.0 and 101.2 are Regional Variants they must be typed with a suffix letter ('r' or 'R' that stays for 'Regional').
- So, the **AF List** will be: 89.4, 90.7r, 93.3, 99.0r, 101.2r, 106.1. Type it down and press the '**add**' button.



If there were no mistakes the new AF list will appear above.
 Please note that regional variants are marked with a different color.

AF Lists	
Lists	Tuned
(5-B) 90.0	90.1 90.2 90.3 90.4
(5-B) 91.2	92.4 92.5 100.3 100.6
(2-B) 88.5	88.6

You see the list of Tuned frequencies with their own **AF** list. **Black AF** are universal. **Blue AF** are regional. click on  to add a new row with **AF** list or click on an existing row to edit it. The following mask will be enabled:

Method	Tuned	AF List
A	100.0	101.0, 102.0, 103.0, 104.0, 105.0

Method: decide between **A/B**. The **B** method allows you to specify also the regionality of the **AF**.

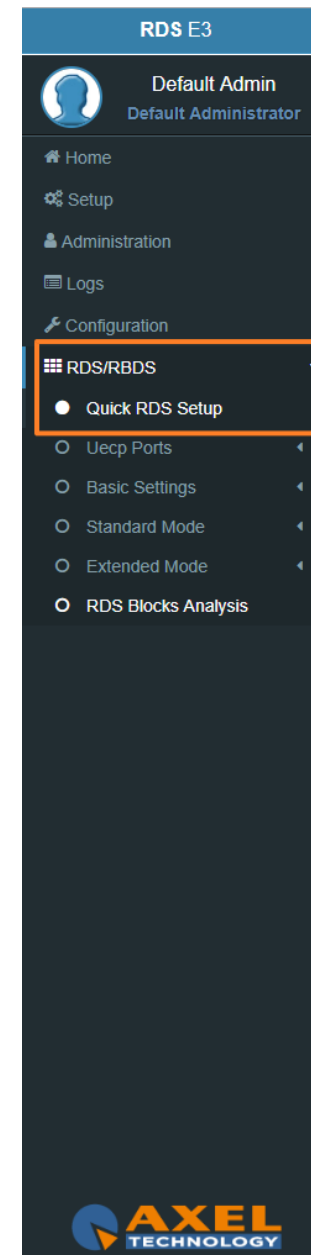
Tuned Freq: here the Main Tuned Freq.

AF List: in this list you see different alternative frequencies separated by a comma (,) and a space. If you want to specify that 90.2 frequency is regional. Type **90.2r**.

Add: click on add to confirm parameters and to add them in rows.

Remove: click on a row that you want to delete and click on remove

Update: select a row that you want to edit, change parameters and click **Update** to save changes.



RadioText

Radiotext is a very useful **RDS** feature that allows your listeners to get more informations about what are they hear or about your Radio. This feature, now supported by all modern receivers, consists of messages up to 64 characters long. You can choose what and how many time show an information.

Let's make an example.

- First of all, press the button marked with a plus (+).
- This allows to edit a new radiotext.
- From the combo box tagged '**Reps**' choose '**4 reps**'.
- From the '**A/B Flag**' combo choose '**On**'.
- In the edit box '**Radiotext**' type: 'You are listen to MARIAH CAREY with SOMEDAY'.
- Finally press the '**add**' button. And it's done.

Now you can see above your broadcasted radiotext.

Go ahead. We want to alternate this info with a Network information.

- Let's press '+' button again.
- Choose: Reps = 1 rep, A/B Flag = On. Type on edit: 'Live ABC Radio at: +012-345-6789 live@abcradio.org @abcRadio'
- Press '**add**' to update the Radiotext buffer.

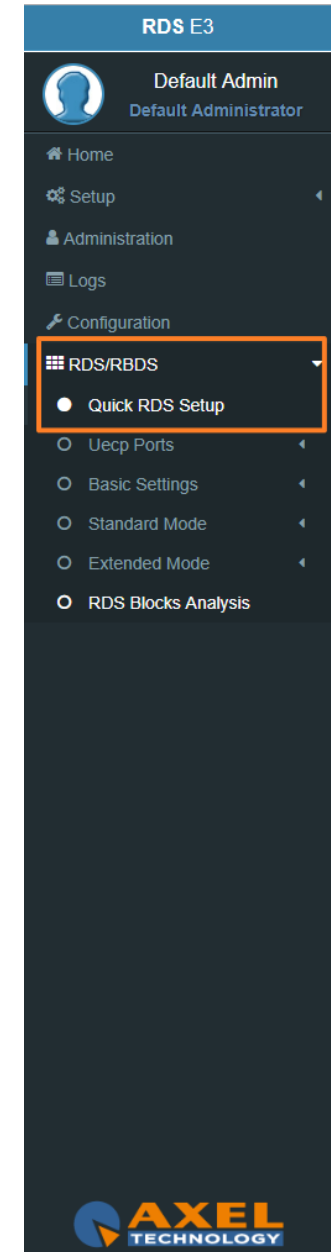
Now you can see on customer's receiver two alternating text: a song (that persists more) and contact infos (that displays for a lesser time).

You can add up to 32 phrases in this buffer. The system cycles each phrase (from the first to the last) for '**Reps**' times befor process next one.

Once last one was processed, the system restart from the first.

The **A/B flag** when set to '**On**' makes the customer's display is wiped each time a new phrase is shown.

NOTE: This **RT** setting is the basic one but this machine has extended powerful features. Please refer to documentation to discover the full features.



Extended Radiotext using SMB

For using properly **SMB/Samba** features, it's required to complete the following form with the configuration of the remote server.

Extended Radiotext using SMB

SMB/Samba Configuration

Active

Hostname IP / Uri Smb/Samba Share

User Name Password

Extended RDS and RT Sources

Rds Global Extended Mode
Enabled

RT Operative Mode RT Extended Source Extended RT Refresh Time

Uecp Compatible REST Command Off

RT+

Auto-generated RT+
Enhanced RT+ disable

Extended RDS and RT Sources: SAMBA requires the activation of **RDS Extended** functions.

RT+: RT+ Service will be automatically generated using every tagged data available.

Important: this service requires 3A and 12A groups in the group sequence list (in Standard Mode - Uecp Services page).

Setup completed


If you want to be notified about this quick setup menu on next session login, please mark the check below.

Setup completed


Congratulations!

Show Quick Setup Menu advice on next login

RDS E3

 Default Admin
Default Administrator

- Home
- Setup
- Administration
- Logs
- Configuration
- RDS/RBDS
 - Quick RDS Setup
 - Uecp Ports
 - Basic Settings
 - Standard Mode
 - Extended Mode
 - RDS Blocks Analysis



3.6.2 UECP PORTS (UNIVERSAL ENCODER COMMUNICATIONS PROTOCOL)

From this section you can set communication parameters with available remote devices. These devices must be able to send **UECP** packets from their serial ports. *Versione UECP_7_05_100224 standard.*

3.6.2.1 SERIAL PORTS

Serial Port setup

To interface properly target's serial ports the right configuration must be set as described below:

Data: 8 bits, Stop bits: 1, Parity: None and Flow control: None.

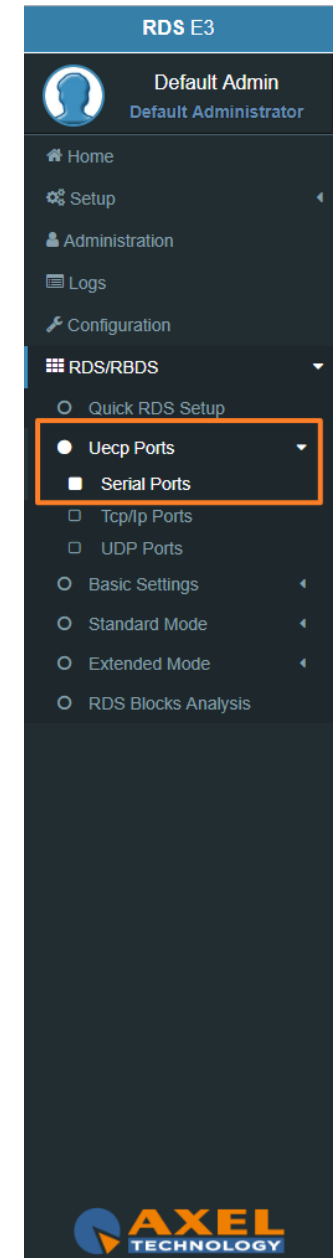
Serial 1&2 Port Configuration

Serial 1 Port Configuration	Serial 2 Port Configuration
Speed 38400 bps	Speed 38400 bps
Communication Mode Bidirectional Requested	Communication Mode Bidirectional Requested
Timeout No Action	Timeout No Action

Speed: No action, 75 bps -115200 bps.

Communication Mode: Unidirectional, Bidirectional Spontaneous, Bidirectional Requested.

Timeout: No action, 1 min - 10 min, Inactive.



3.6.2.2 TCP/IP PORTS

From this section you can set communication parameters with available remote devices. These devices must be able to send **UECP** packets through the **TCP/IP** protocol.

TCP/IP Port addresses

Target's TCP/IP ports are reachable at:

Tcp/Ip Port 1: 10000, Tcp/Ip Port 2: 10001, Tcp/Ip Port 3: 10002, Tcp/Ip Port 4: 10003.

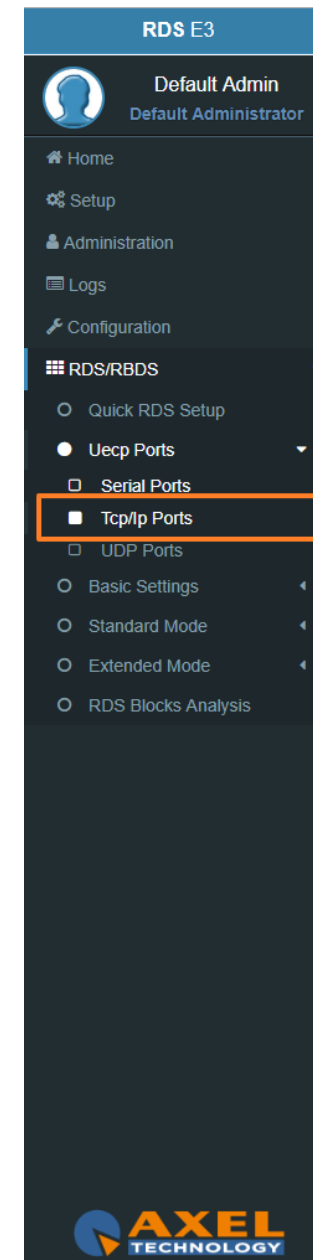
Tcp/Ip 1, 2, 3 & 4 Port Configuration

<p>Tcp/Ip 1 Port Configuration</p> <p>Mode Normal Priority</p> <p>Communication Mode Bidirectional Requested</p> <p>Timeout No Action</p>	<p>Tcp/Ip 2 Port Configuration</p> <p>Mode Normal Priority</p> <p>Communication Mode Bidirectional Requested</p> <p>Timeout No Action</p>
<p>Tcp/Ip 3 Port Configuration</p> <p>Mode Normal Priority</p> <p>Communication Mode Bidirectional Requested</p> <p>Timeout No Action</p>	<p>Tcp/Ip 4 Port Configuration</p> <p>Mode Normal Priority</p> <p>Communication Mode Bidirectional Requested</p> <p>Timeout No Action</p>

Mode: No Action, Low Priority, Normal Priority, High Priority.

Communication Mode: Unidirectional, Bidirectional Spontaneous, Bidirectional Requested.

Timeout: No action, 1 min - 254 min, Inactive.



3.6.2.3 UDP PORTS

From this section you can set communication parameters with available **UDP** remote devices. These devices must be able to send **UECP** packets through **UDP** protocol.

UDP Port addresses

Target's **UDP** ports are reachable at:

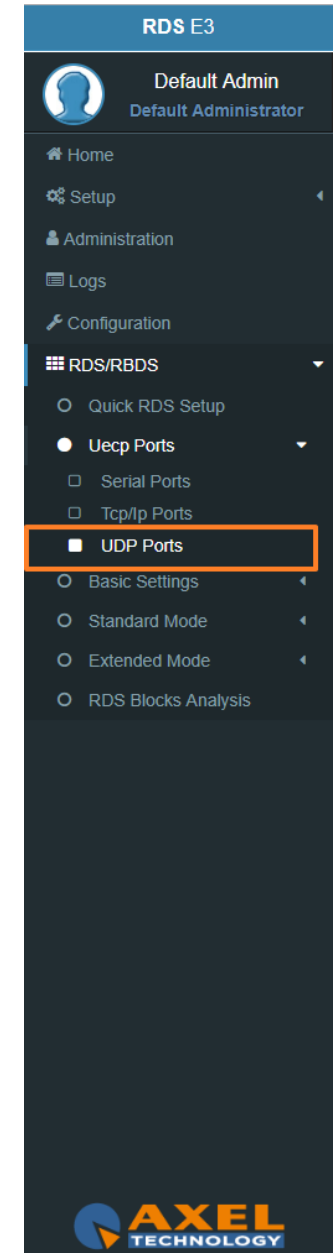
Udp Port 1: 11000, Udp Port 2: 11001, Udp Port 3: 11002, Udp Port 4: 11003.

UDP 1, 2, 3 & 4 Port Configuration

<p>UDP 1 Port Configuration</p> <p>Mode No Action</p> <p>Timeout No Action</p>	<p>UDP 2 Port Configuration</p> <p>Mode Normal Priority</p> <p>Timeout No Action</p>
<p>UDP 3 Port Configuration</p> <p>Mode Normal Priority</p> <p>Timeout No Action</p>	<p>UDP 4 Port Configuration</p> <p>Mode Normal Priority</p> <p>Timeout No Action</p>

Mode: No Action, Low Priority, Normal Priority, High Priority

Timeout: No action, 1 min - 254 min, Inactive



3.6.3 BASIC SETTINGS

3.6.3.1 UECP ADDRESSING

The recipient encoder, getting **UECP** data frames from remote devices, must be identifiable by a unique address: **Site (Zone) + Encoder ID**. The remote devices will send **UECP** data frames to recipients through this addressing data couple. For example a **UECP** data frame could be sent to all **RDS** devices of the desired Site or to the same Encoder **ID** of all Sites.

This section is used to set the individual device **UECP** address. In **Individual Address** set **RDS** site number and encoder number.

Individual Address



Individual Address

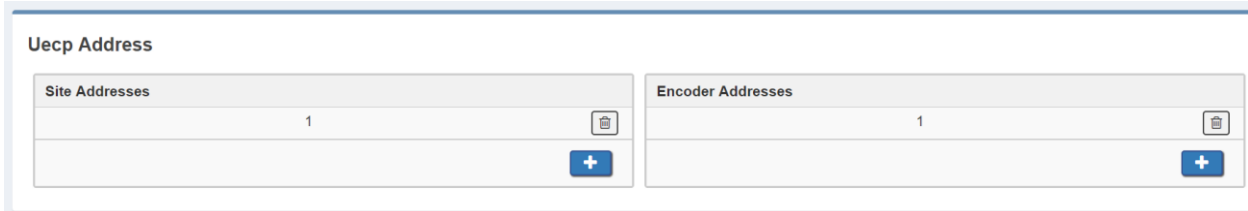
Site	Encoder
2	3

Site(Zone): assign to your device the desired site number

Encoder: assign to your device a desired encoder ID number

Uecp Address

Here you can have all the **Uecp Addresses** list.

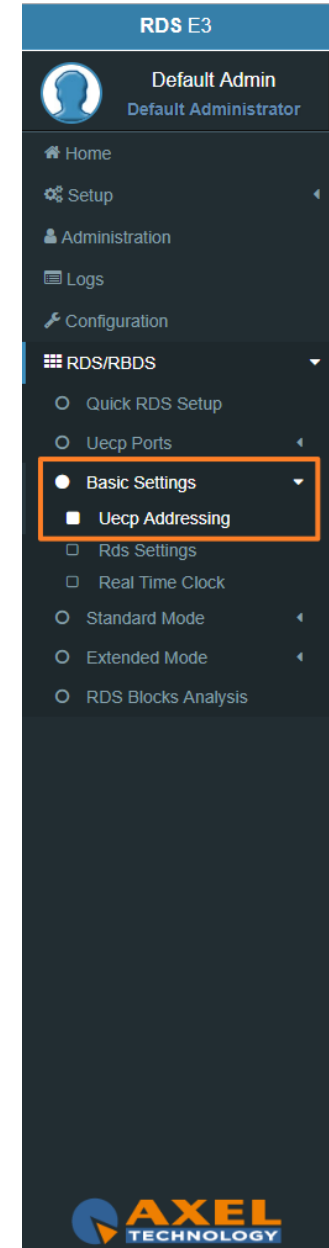


Uecp Address

Site Addresses	Encoder Addresses
1	1

Site Addresses: the range of possible values is 1 to 1023

Encoder Addresses: the range of possible values is 1 to 63



RDS E3

Default Admin
Default Administrator

- Home
- Setup
- Administration
- Logs
- Configuration
- RDS/RBDS
 - Quick RDS Setup
 - Uecp Ports
 - Basic Settings**
 - Uecp Addressing**
 - Rds Settings
 - Real Time Clock
 - Standard Mode
 - Extended Mode
 - RDS Blocks Analysis

AXEL TECHNOLOGY

3.6.3.2 RDS SETTINGS

Rds General Settings

Rds General Settings

Rds On

Rds Global Extended Mode
Enabled

Rds Synchronism
Internal

PS Char Table Select
No Control Chars

Max Exported DataSet Number
1

Rds On: In the device Enable/Disable the RDS encoding.

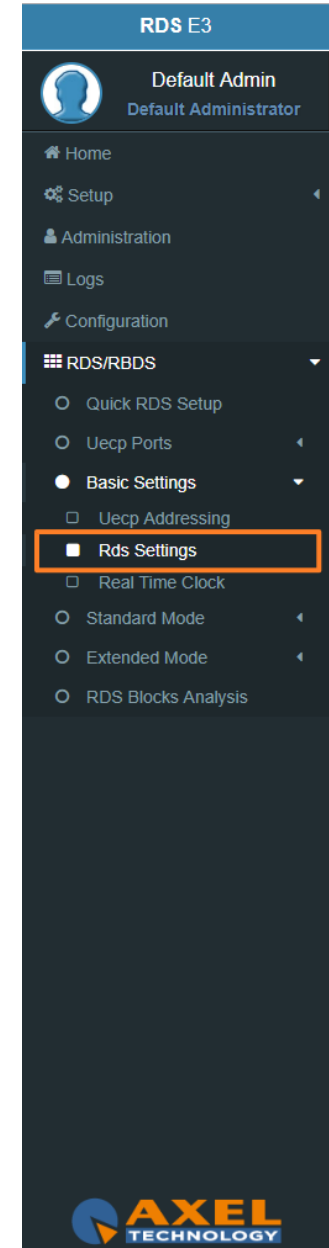
Rds Global Extended Mode: Enable/Disable the Extended Mode.

Rds Synchronism (Pilot Synch): Internal, Auto Sync In (External & Digital), Auto Mpx In(External & Analogue).

PS Char Table Select: we suggest you to leave this parameter in **No Control Chars**.

A receiver, that entirely supports the character coding as defined in the **RDS standard**, probably does not exist. An assumption, that recent receivers give better results than older types, is valid only partially.

In default of a code table switching character, the display coding taking effect at address 0 should be assumed to be in accordance with code table. Thus when using only the default **Characters Table**, **No Control Chars** switching is required.



The screenshot shows the RDS E3 user interface. At the top, it says 'RDS E3'. Below that, there's a user profile for 'Default Admin' (Default Administrator). A navigation menu on the right includes: Home, Setup, Administration, Logs, Configuration, RDS/RBDS (expanded), Quick RDS Setup, Uecp Ports, Basic Settings (expanded), Uecp Addressing, Real Time Clock, Standard Mode, Extended Mode, and RDS Blocks Analysis. The 'Rds Settings' option under 'Basic Settings' is highlighted with an orange border.

Active Dataset Selection

Active Dataset Selection

On Air Active Dataset

1

On Air Active Dataset: select the Data Set number that you want to air.

Rds Levels

Rds Levels

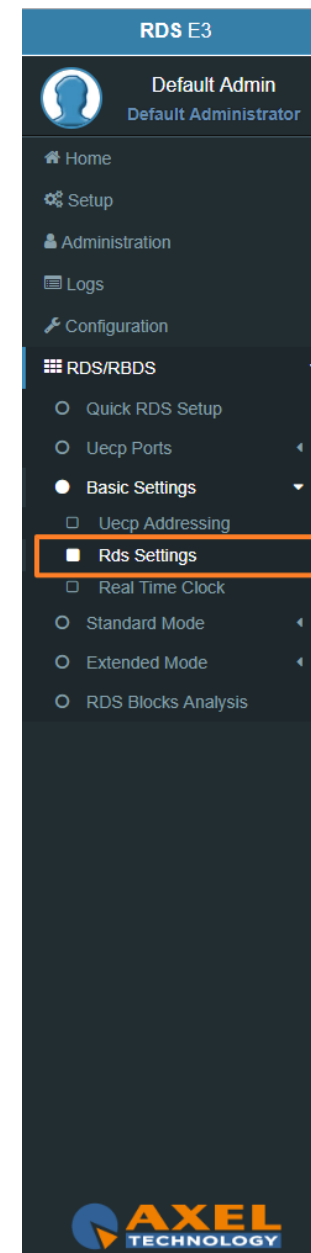
Current Level and Phase Reference Table Index

3

Level and Phase Reference Table		
	Level (mVpp)	Phase (Deg)
1	50	0.0
2	80	0.0
3	85	0.0
4	50	0.0
5	50	0.0
6	50	0.0

Current Level and Phase Reference Table Index: in the next field, enter the index number of the table row The related signal **Level** and signal **Phase** couple will be aired.

Level and Phase Reference Table: available, choosable and editable Levels(mVpp: millivolt peak-to-peak) and related Phases(Deg: Degrees).



The following two parameter groups manage the special transitions of **15B group** and **14B group** in the standard RDS group sequence at the **TA/EON TA - ON/OFF**.

TA Control (15B)

TA TRAFFIC ANNOUNCEMENT IDENTIFICATION control force the transition of the **15B group** in the standard RDS group sequence in relation with the activation/deactivation of the **TA**.

TA Control (15B)

Minimum Group Spacing <input style="width: 100%;" type="text" value="0"/>	ON Transition 15B Groups <input style="width: 100%;" type="text" value="0"/>	OFF Transition 15B Groups <input style="width: 100%;" type="text" value="0"/>
--	---	--

Minimum Group Spacing: number of groups of the standard RDS sequence, between two recurrences of the 15B groups will be inserted and transmitted.

ON Transition 15B(fast signal switching) Groups: only when TA is turned-ON, this parameter decides the number of 15B groups transmitted in a single recurrence.

OFF Transition 15B Groups: only when TA is turned-OFF, this parameter decides the number of 15B groups transmitted in a single recurrence.

EON TA Control (14B)

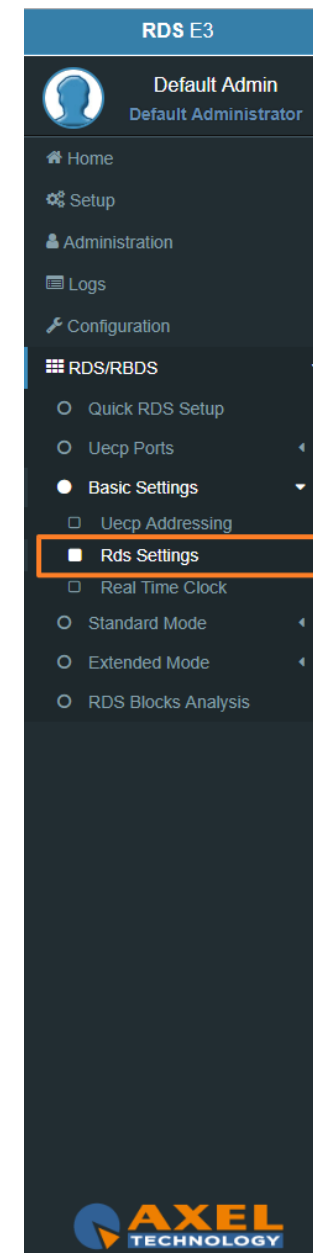
This control force the transition of the 14B group in the standard RDS group sequence in relation with the activation/deactivation of the EON TA.

EON TA Control (14B)

Minimum Group Spacing <input style="width: 100%;" type="text" value="0"/>	ON Transition 14B Groups <input style="width: 100%;" type="text" value="0"/>	OFF Transition 14B Groups <input style="width: 100%;" type="text" value="0"/>
--	---	--

Minimum Group Spacing: number of groups of the standard RDS sequence, between two recurrences of the 14B groups will be inserted and transmitted.

ON Transition 14B(fast signal switching) Groups: only when EON TA is turned-ON, this parameter decides the number of 14B groups transmitted in a single recurrence.



The screenshot shows the RDS E3 user interface. At the top, it says 'RDS E3' and 'Default Admin Default Administrator'. The navigation menu includes: Home, Setup, Administration, Logs, Configuration, RDS/RBDS (expanded), Quick RDS Setup, Uecp Ports, Basic Settings (selected), Uecp Addressing, Rds Settings (highlighted with an orange box), Real Time Clock, Standard Mode, Extended Mode, and RDS Blocks Analysis. The Axel Technology logo is at the bottom right.

OFF Transition 14B Groups: only when **EON TA** is turned-**OFF**, this parameter decides the number of **14B groups** transmitted in a single Recurrence.

SMB/SAMBA Share Settings

SMB/SAMBA Share Settings

<p>File Name</p> <input type="text" value="PLAYLIST.XML"/>	<p>Format</p> <input type="text" value="DjPro V.2.0"/>
<p>Status</p> <p style="color: green;">All Right</p>	

File Name: in this field type the file name. The RDS will search in the previously set SMB/SAMBA IP/FOLDER for song and author informations.

Format: Choose between DjPro V.1.0, DjPro V.2.0, Dalet Simple, MB Studio.

Status: in this field you can see if the file is found or not

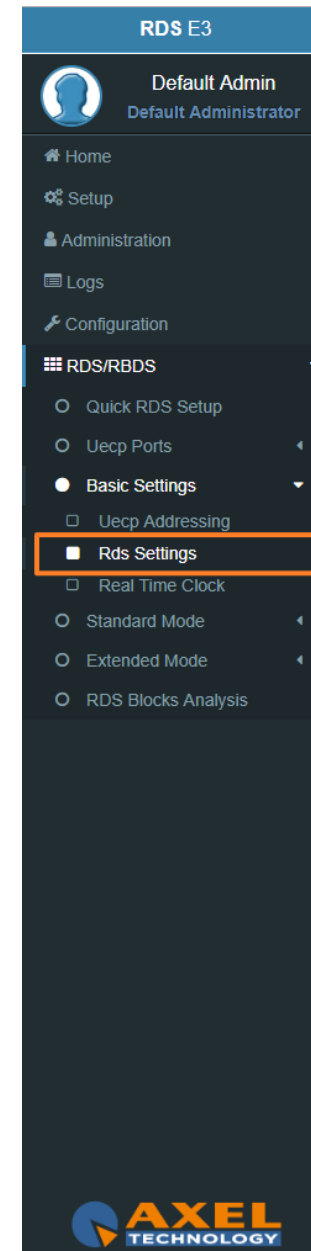
RDS Events

RDS Events

●	masked	Rds Off Alarm
●	masked	Pilot Sync Alarm
●	masked	Smb/Samba Share Rds Alarm

Masked/Unmasked Pilot Sync Alarm: Mask/Unmask the alarm of the synchronization between a Pilot frequency and the encoder.

Masked/Unmasked Smb/Samba Share Rds Alarm: Mask/Unmask the alarm of the connection with the communication folder with your playout.



3.6.3.3 REAL TIME CLOCK

RTC Settings

RTC Settings

CT On/Off

Local Time Offset

+2:00 hrs

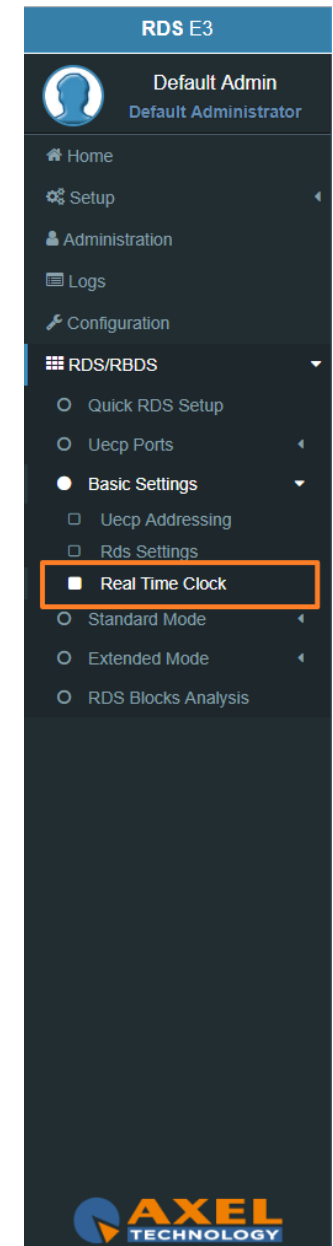
Real Time Clock Correction (ms)

0

CT On/Off: enable/disable the transmission of **RDS** Time clock.

Local Time Offset: Select here the desired Local Time Offset.

Real Time Clock Correction (ms): to avoid delays related to the signal transmission-reception, insert here a clock correction time(ms).



3.6.4 STANDARD MODE

3.6.4.1 UECP SERVICES

Dataset General Settings

Dataset General Settings

Editing Dataset Index

DSN 1

Editing Dataset Index: Select here the desired Index to start the related Dataset editing.

PSN List

PSN List

PSN List

REFERENCE	Main	Eon1	Eon2	Eon3	Eon4	Eon5	Eon6	Eon7	Eon8	Eon9	Eon10
PS-NUMBER	001	002	003	004	005	006	007	008	009	010	011
ENABLED	-E-	-E-	---	---	---	---	---	---	---	---	---

Reference: in reference you can read all the available reference names

PS-Number: PS-Number of the related reference

ENABLED: (-E- : PSN enabled) (--- : PSN disabled)

PSN List Enable

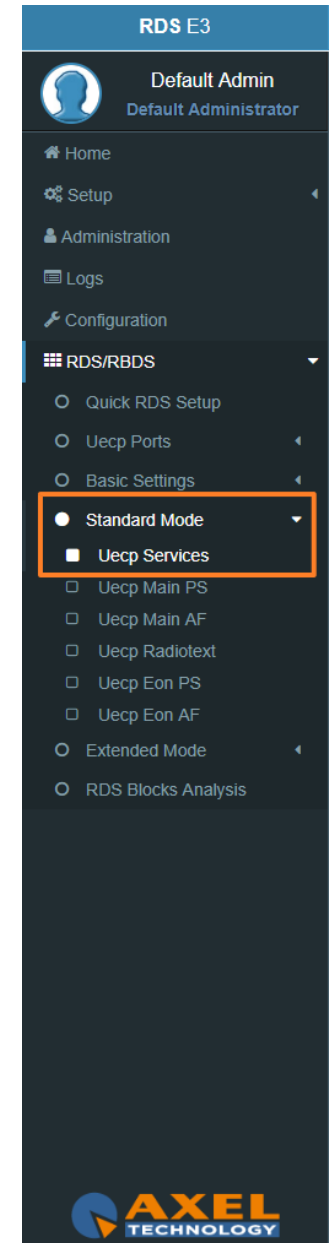
PSN List Enable

EON 1 EON 2 EON 3 EON 4 EON 5 EON 6 EON 7 EON 8 EON 9 EON 10

MAIN PS EON 1 ✕

EON 1 : Enabled EON. If the EON is enabled you can see EON 1 ✕ in the bottom section. To disable it click on the related ✕ .

EON 2 : Disabled EON. To enable it click on it.



Group List

In the following mask you can decide the Group List and the group sequence order.

0A : to add the group at the end of the group sequence.

In the bottom section you see the list of group sequence.

< 0A > x represents a present group inside the group sequence.

By clicking on **◀** you move it in the previous sequence position.

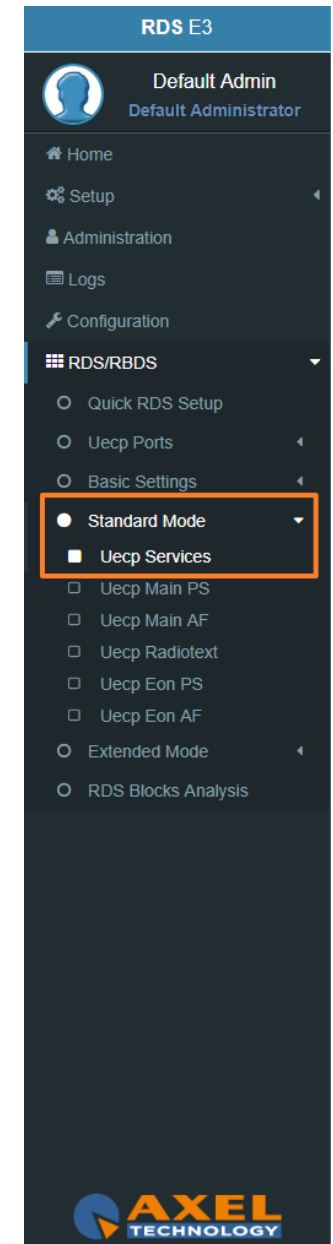
By clicking on **▶** you move it in the following order position.


By clicking on **✕** you erase it from the sent RDS/RBDS groups.

ON AIR GROUPS

<i>Services</i>	<i>RDS groups</i>
Programme Identification (PI) code	All
Programme Type (PTY) code	All
Traffic Programme (TP) identification code	All
Programme Service (PS) name	0A, 0B
Alternative frequency (AF) code pairs	0A
Traffic announcement (TA) code	0A, 0B, 14B, 15B
Decoder identification (DI) code	0A, 0B, 15B
Music Speech (MS) code	0A, 0B, 15B
RadioText (RT) message	2A, 2B
Enhanced other networks information	14A

Group Type	Description of Use
0 A	Basic tuning and switching information only
0 B	Basic tuning and switching information only
1A	Program Item Number and slow labelling codes only
1B	Program Item Number
2 A	Radiotext only
2 B	Radiotext only
3 A	Applications Identification for ODA only
3 B	Open Data Applications
4 A	Clock-time and date only
4 B	Open Data Applications
5 A	Transparent Data Channels (32 channels) or ODA
5 B	Transparent Data Channels (32 channels) or ODA
6 A	In House applications or ODA
6 B	In House applications or ODA
7 A	Radio Paging or ODA
7 B	Open Data Applications
8 A	Traffic Message Channel or ODA
8 B	Open Data Applications
9 A	Emergency Warning System or ODA
9 B	Open Data Applications
10 A	Program Type Name
10 B	Open Data Applications
11 A	Open Data Applications
11 B	Open Data Applications
12 A	Open Data Applications
12 B	Open Data Applications
13 A	Enhanced Radio Paging or ODA
13 B	Open Data Applications
14 A	Enhanced Other Networks information only
14 B	Enhanced Other Networks information only
15 A	Undefined
15 B	Fast switching information only



By clicking on  you can open the following top describing table that indicate to the specific work of groups:

Group List

Groups

0A : Basic Tuning & Switching Info	6A : IH	12A : ODA data
0B : Basic Tuning & Switching Info	6B : IH	12B : ODA data
1A : PIN/SLC	7A : RP	13A : ODA data
1B : PIN	7B : ODA data	13B : ODA data
2A : RT	8A : TMC	14A : EON
2B : RT	8B : ODA data	14B : EON
3A : ODA Registration	9A : EWS	15A : ODA data
3B : ODA data	9B : ODA data	15B : Fast switching info
4A : CT	10A : PTYN	
4B : ODA data	10B : ODA data	
5A : TDC	11A : ODA data	
5B : TDC	11B : ODA data	

0A0B1A1B2A2B3A3B4A4B5A5B6A6B7A7B8A8B9A9B10A10B

11A11B12A12B13A13B14A14B15A15B

◀ 0A ▶ ✕
◀ 2A ▶ ✕
◀ 0A ▶ ✕
◀ 10A ▶ ✕
◀ 0A ▶ ✕

List of other useful abbreviations

AF	Alternative Frequencies list	MS	Music Speech switch
AID	Applications IDentification for ODA	ODA	Open Data Applications
ARI	Autofahrer Rundfunk Information	PI	Programme Identification
CI	Country Identifier	PIN	Programme Item Number
CT	Clock Time and date	PS	Programme Service name
DI	Decoder Identification	PTY	Program TYpe
ECC	Extended Country Code	PTYI	Dynamic Programme TYpe Indicator
EG	Extended Generic indicator	PTYN	Programme TYpe Name
EON	Enhanced Other Networks information	RBDS	Radio Broadcast Data System
EWS	Emergency Warning System	RDS	Radio Data System
IH	In House application	RP	Radio Paging
ILS	International Linkage Set indicator	RT	Radio Text
LA	Linkage Actuator	TA	Traffic Announcement flag
LI	Linkage Identifier	TDC	Transparent Data Channels
LSN	Linkage Set Number	TMC	Traffic Message Channel
TP	Traffic Programme flag		

RDS E3

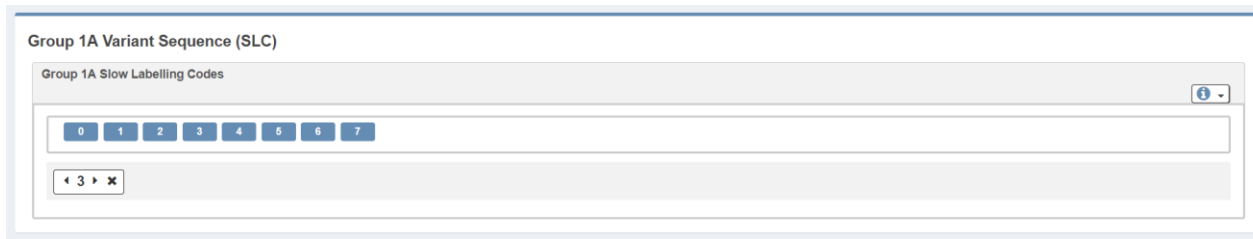
Default Admin

Default Administrator

- Home
- Setup
- Administration
- Logs
- Configuration
- RDS/RBDS**
- Quick RDS Setup
- Uecp Ports
- Basic Settings
- Standard Mode**
- Uecp Services
- Uecp Main PS
- Uecp Main AF
- Uecp Radiotext
- Uecp Eon PS
- Uecp Eon AF
- Extended Mode
- RDS Blocks Analysis

Group 1A Variant Sequence (SLC – Slow Labelling Codes)

In the following mask you can decide the Group 1A Variant Sequence and his Slow Labelling Codes sequence order.



3 : to add the SLC at the end of the sequence.

In the bottom section you see the list of SLC sequence.

◀ 3 ▶ X : represents a present SLC inside the sequence.

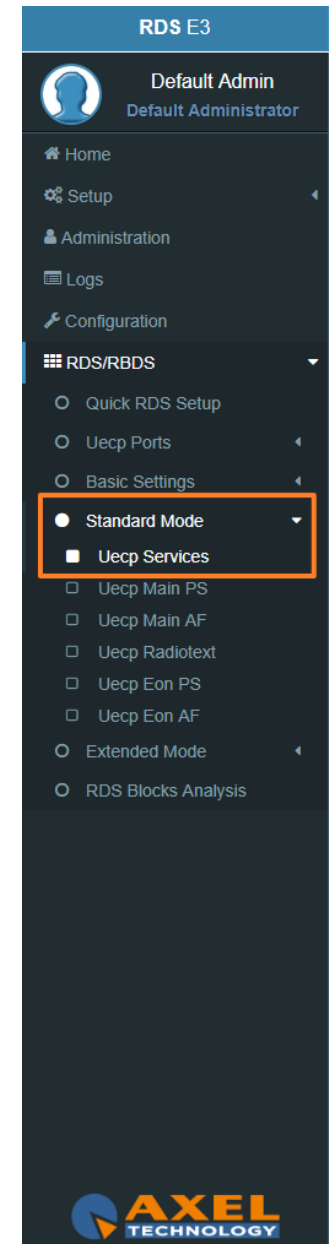
By clicking on ◀ you move it in the previous sequence position.

By clicking on ▶ you move it in the following order position.

By clicking on X you erase it from the transmitted SLCs.

By clicking on ⓘ you can open the following top describing table:

Group 1A Slow Labelling Codes ⓘ	
0 : ECC	4 : n/a
1 : n/a	5 : n/a
2 : Paging ID	6 : Broadcast
3 : Language Codes	7 : EWS Channel Id



Group 14A Variant Sequence (EON – Enhanced Other Networks information)

In the following mask you can decide the Group 14A Variant Sequence and his Codes sequence order.

Group 14A Variant Sequence (EON)

Group 14 A i

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

◀ 0 ▶ ✕
◀ 1 ▶ ✕
◀ 2 ▶ ✕
◀ 3 ▶ ✕
◀ 4 ▶ ✕
◀ 5 ▶ ✕
◀ 6 ▶ ✕
◀ 7 ▶ ✕
◀ 8 ▶ ✕
◀ 9 ▶ ✕
◀ 10 ▶ ✕
◀ 11 ▶ ✕

◀ 12 ▶ ✕
◀ 13 ▶ ✕

3 : to add the Code at the end of the sequence.

In the bottom section you see the list of Codes sequence.

◀ 3 ▶ ✕ : represents a present code inside the sequence.

By clicking on ◀ you move it in the previous sequence position.

By clicking on ▶ you move it in the following order position.

By clicking on ✕ you erase it from the transmitted codes list.

By clicking on i you can open the following top describing table:

Group 14 A i

0 : PS-ON	4 : AF-ON (A Method)	8 : AF-ON (Map Freq 4)	12 : Linkage
1 : PS-ON	5 : AF-ON (Map Freq 1)	9 : AF-ON (AM)	13 : TA/PTY-ON
2 : PS-ON	6 : AF-ON (Map Freq 2)	10 : n/a	14 : PIN-ON
3 : PS-ON	7 : AF-ON (Map Freq 3)	11 : n/a	

RDS E3

Default Admin

Default Administrator

- Home
- Setup
- Administration
- Logs
- Configuration
- RDS/RBDS
 - Quick RDS Setup
 - Uecp Ports
 - Basic Settings
 - Standard Mode
 - Uecp Services
 - Uecp Main PS
 - Uecp Main AF
 - Uecp Radiotext
 - Uecp Eon PS
 - Uecp Eon AF
 - Extended Mode
 - RDS Blocks Analysis

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MENU | RDS/RBDS

3.6.4.2 UECP MAIN PS

This section is useful to define all **UECP Main PS** parameters

Main Network Program Service

Main Network Program Service

Editing Dataset Index DSN 1	Editing Program Service Main PS
--------------------------------	------------------------------------

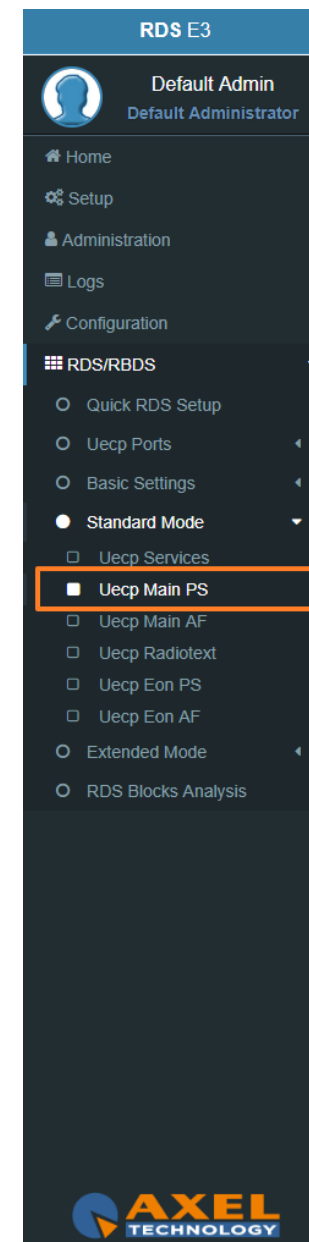
Editing Dataset Index: decide which **Main PS** you want to edit, select the related **DSN** (Dataset Number).

Editing Program Service: You will see this parameter also in **UECP Eon PS**. Here the parameters is not selectable because this is the **MAIN Program**.

Basic Settings

Basic Settings

PI 5301	PS hnology	
TP Off	TA Off	
PTY Varied	PTYN TestPTYN	
PIN Day 0	PIN Hour 0	PIN Minute 0
Music/Speech Music	Decoder Information Stereo	



PI(Program Identification): type the PI Code. Lock at

PS(Program Station): type the Program Station Name.

TP(Traffic Program): On/Off

TA(Traffic Announcement): On/Off

PTY: selectable value between: Pop Music, Rock Music, Culture, Science...

PTYN: type a desired description for the program.

PIN Day: if you want to schedule a special PTY insert here the month day. From 00 to 31.

PIN Hour: if you want to schedule a special PTY insert here the desired hour (HH). From 00 to 23.

PIN Minute: If you want to schedule a special PTY insert here the desired minute (MM). From 00 to 59.

Music/Speech: select here if you have Music program or a Speech program.

Decoder Information: select the audio decoder information.

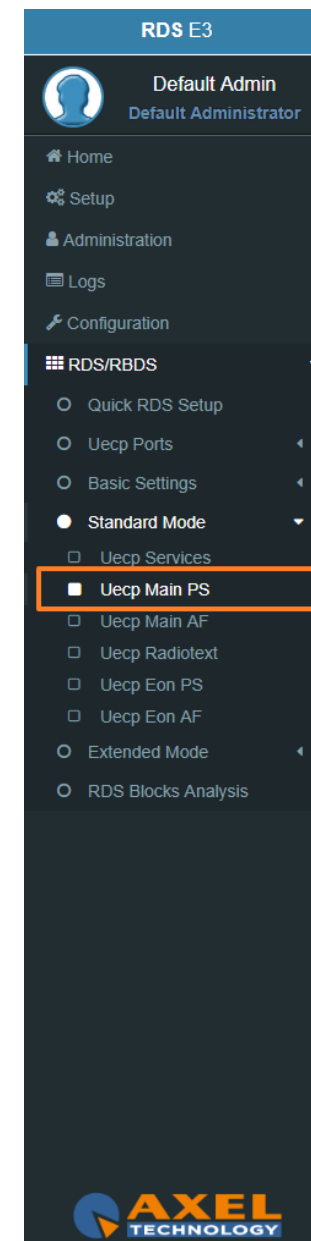
PI (Program identification)

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 changes to the **PI** code assignment are summarized as follows:

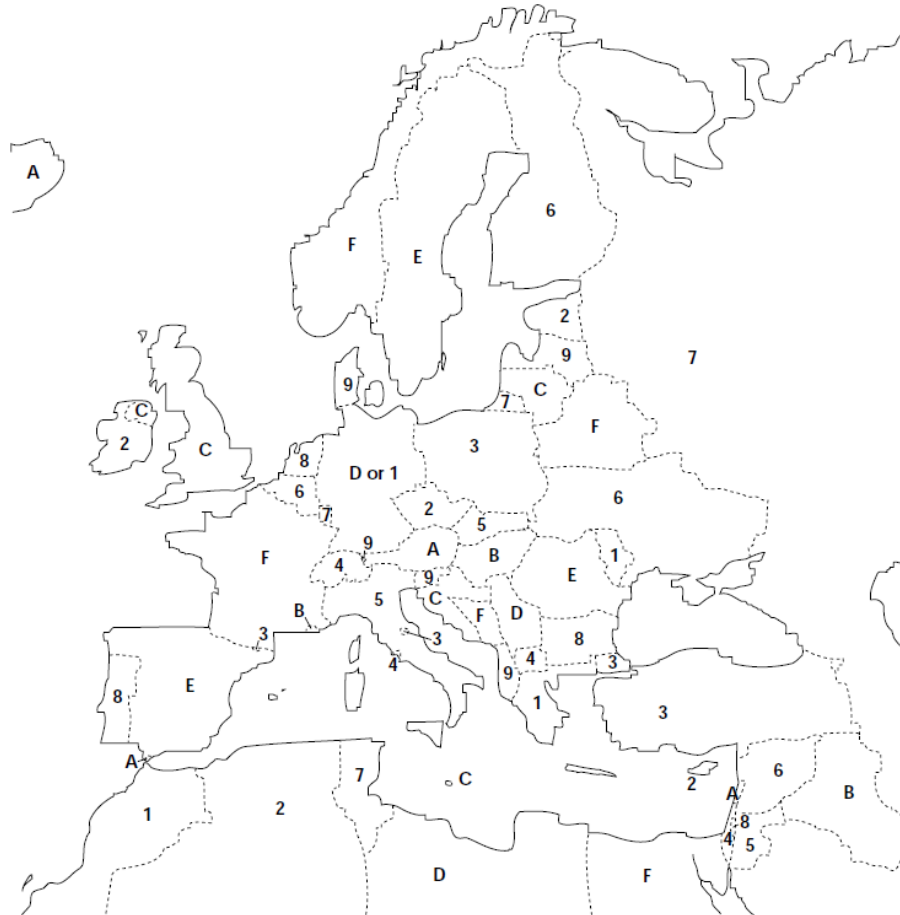
- **PI** assignments below **B000** will remain as is, allowing **AF** switching but no regionalization. Call signs deriving **PI** codes “**x0xx**”, and “**xx00**” are re-mapped into the “**A**” range of **PI**’s.
- 3 Letter call signs – Modifications were made to the 3 letter call **PI** code assignment table.
- **C000 – CFFF** assigned to Canada. Allows **AF** switching, but no regionalization. **PI** codes **C0xx**, and **Cx00** are excluded from use.
- **F000 – FFFF** assigned to Mexico. Allows **AF** switching, but no regionalization. **PI** codes **F0xx**, and **Fx00** are excluded from use.



- **B_01 – B_FF, D_01 – D_FF, E_01 – E_FF** assigned for national networks in US, Canada, and Mexico. Regionalization allowed. **NRSC** to provide assignments for all three countries. It should be noted that operation in this region is the same as it is for all **RDS PI** codes.

The first PI character identifies country

5000



RDS E3

Default Admin

Default Administrator

- [Home](#)
- [Setup](#)
- [Administration](#)
- [Logs](#)
- [Configuration](#)
- RDS/RBDS
- Quick RDS Setup
- Uecp Ports
- Basic Settings
- Standard Mode
 - Uecp Services
 - Uecp Main PS
 - Uecp Main AF
 - Uecp Radiotext
 - Uecp Eon PS
 - Uecp Eon AF
- Extended Mode
- RDS Blocks Analysis

<i>Country</i>	<i>ISO code</i>	<i>ECC</i>	<i>Country code</i>
Albania	AL	E0	9
Algeria	DZ	E0	2
Algeria	DZ	E0	2
Andorra	AD	E0	3
Angola	AO	D0	6
Ascension Island		D1	A
Austria	AT	E0	A
Azores(Portugal)	PT	E4	8
Belarus	BY	E3	F
Belgium	BE	E0	6
Benin	BJ	D0	E
Bosnia Herzegovina	BA	E4	F
Botswana	BW	D1	B
Bulgaria	BG	E1	8
Burkina Faso	BF	D0	B
Burundi	BI	D1	9
Cabinda		D3	4
Cameroon	CM	D0	1
Canaries (Spain)	ES	E2	E
Canary Island	ES	E0	E
Cape Verde	CV	D1	6
Central African Republic	CF	D0	2
Chad	TD	D2	9
Comoros	KM	D1	C
Congo	CG	D0	C

<i>Country</i>	<i>ISO code</i>	<i>ECC</i>	<i>Country code</i>
Cote d'Ivoire	CI	D2	C
Croatia	HR	E3	C
Cyprus	CY	E1	2
Czech Republic	CZ	E2	2
Democratic Republic of Congo	ZR	D2	B
Denmark	DK	E1	9
Djibouti	DJ	D0	3
Egypt	EG	E0	F
Egypt	EG	E0	F
Equatorial Guinea	GQ	D0	7
Estonia	EE	E4	2
Ethiopia	ET	D1	E
Faroe (Denmark)	DK	E1	9
Finland	FI	E1	6
France	FR	E1	F
Gabon		D0	8
Gambia	GM	D1	8
Germany	DE	E0	D or 1
Ghana	GH	D1	3
Gibraltar(United Kingdom)	GI	E1	A
Greece	GR	E1	1
Guinea-Bissau	GW	D2	A
Hungary	HU	E0	B
Iceland	IS	E2	A
Iraq	IQ	E1	B

<i>Country</i>	<i>ISO code</i>	<i>ECC</i>	<i>Country code</i>
Ireland	IE	E3	2
Israel	IL	E0	4
Italy	IT	E0	5
Jordan	JO	E1	5
Kenya	KE	D2	6
Latvia	LV	E3	9
Lebanon	LB	E3	A
Lesotho	LS	6	D3
Liberia	LR	D1	2
Libya	LY	E1	D
Libya	LY	E1	D
Liechtenstein	LI	E2	9
Lithuania	LT	E2	C
Luxembourg	LU	E1	7
Macedonia	MK	E3	4
Madagascar	MG	D0	4
Madeira (Portugal)	PT	E4	8
Malawi	MW	D0	F
Mali	ML	D0	5
Malta	MT	E0	C
Mauritania	MR	D1	4
Mauritius	MU	D3	A
Moldova	MD	E4	1
Monaco	MC	E2	B

<i>Country</i>	<i>ISO code</i>	<i>ECC</i>	<i>Country code</i>
Morocco	MA	E2	1
Mozambique	MZ	D2	3
Namibia	NA	D1	1
Netherlands	NL	E3	8
Niger	NE	D2	8
Nigeria	NG	D1	F
Norway	NO	E2	F
Palestine	PS	E0	8
Poland	PL	E2	3
Portugal	PT	E4	8
Republic of Guinea	GN	D0	9
Romania	RO	E1	E
Russian Federation	RU	E0	7
Rwanda	RW	D3	5
San Marino	SM	E1	3
Sao Tome & Principe	ST	D1	5
Senegal	SN	D1	7
Seychelles	SC	D3	8
Sierra Leone	SL	D2	1
Slovakia	SK	E2	5
Slovenia	SI	E4	9
Spain	ES	E2	E
Sweden	SE	E3	E
Switzerland	CH	E1	4

ECC	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
E0	DE	DZ	AD	IL	IT	BE	RU	PS	AL	AT	HU	MT	DE		EG
E1	GR	CY	SM	CH	JO	FI	LU	BG	DK	GI	IQ	GB	LY	RO	FR
E2	MA	CZ	PL	VA	SK	SY	TN		LI	IS	MC	LT	YU	ES	NO
E3		IE	TR	MK				NL	LV	LB		HR		SE	BY
E4	MD	EE				UA		PT	SI						BA

The second PI character identifies program type in terms of area coverage:

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- 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.)
- If the entire hexadecimal code is already known, enter it into [RDS/RBDS > Quick RDS Setup > PI](#).

Area coverage code	Local	International	National	Supra-regional	Regional1	Regional2	Regional3
HEX	0	1	2	3	4	5	6

Area coverage code	Regional4	Regional5	Regional6	Regional7	Regional8	Regional9	Regional10	Regional11	Regional12
HEX	7	8	9	A	B	C	D	E	F

The last two characters identify a hexadecimal number between 0₁₆<x<FF₁₆ (0₁₀<x<256₁₀) assigned by the telecommunications authority

5000

These last two characters are assigned by the National Telecommunications Authority.

PS (Program Service) NAME

Program Service Name is a text consisting of not more than eight alphanumeric characters which is displayed by **RDS** receivers in order to inform the listener what programme service is being broadcast by the station to which the receiver is tuned. An example for a **PS** name is "Radio 21". The Programme Service name is not intended to be used for automatic search tuning.

TP (Traffic Programme identification)

This is a flag to indicate that the tuned programme carries traffic announcements. The **TP** flag must only be set on programmes which dynamically switch on the **TA** identification during traffic announcements. The signal shall be considered during automatic search tuning.

TA (Traffic Announcement identification)

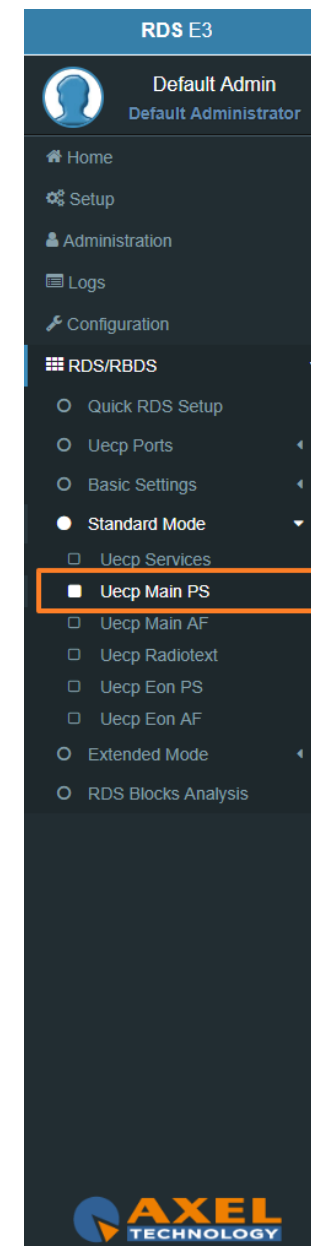
This is an **on/off** switching signal to indicate when a traffic announcement is on air. The signal could be used in receivers to:

- 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 programme to another one carrying a traffic announcement.

After the end of the traffic announcement the initial operating mode will be restored.

PTY (Program Type)

This is an identification number to be transmitted with each programme item and which is intended to specify the current **Programme 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 programme 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.

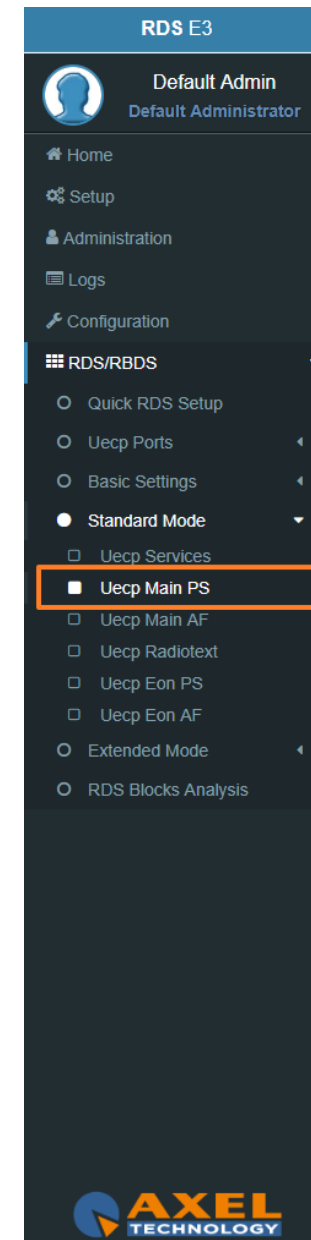


PTYN (Program Type Name)

The **PTYN** feature is used to further describe current **PTY**. **PTYN** permits the display of a more specific **PTY** description (max 8 characters) 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 programme type once tuned to a programme. If the broadcaster is satisfied with a default **PTY** name, it is not necessary to use additional data capacity for **PTYN**. The Programme Type Name is not intended to be used for automatic **PTY** selection and must not be used for giving sequential information.

NOTE: the **PTY** only can be programmed accordingly to the **UECP** protocol. The **PTYN** is related to the **UECP** Extended (custom) RDS programming mode.

Number	PTY Code	PTY (Programme type)	8-character display	16-character display
0	00000	No programme type or undefined	None	None
1	00001	News	News	News
2	00010	Current Affairs	Affairs	Current Affairs
3	00011	Information	Info	Information
4	00100	Sport	Sport	Sport
5	00101	Education	Educate	Education
6	00110	Drama	Drama	Drama
7	00111	Culture	Culture	Cultures
8	01000	Science	Science	Science
9	01001	Varied	Varied	Varied Speech
10	01010	Pop Music	Pop M	Pop Music
11	01011	Rock Music	Rock M	Rock Music
12	01100	Easy Listening Music	Easy M	Easy Listening
13	01101	Light classical	Light M	Light Classics M
14	01110	Serious classical	Classics	Serious Classics
15	01111	Other Music	Other M	Other Music



The screenshot shows the RDS E3 user interface. At the top, it says 'RDS E3' and 'Default Admin'. Below that, there's a user profile icon and 'Default Administrator'. The main menu includes: Home, Setup, Administration, Logs, Configuration, RDS/RBDS (expanded), Quick RDS Setup, Uecp Ports, Basic Settings, Standard Mode (selected), Uecp Services (expanded), Uecp Main PS (highlighted with an orange box), Uecp Main AF, Uecp Radiotext, Uecp Eon PS, Uecp Eon AF, Extended Mode, and RDS Blocks Analysis. The Axel Technology logo is at the bottom right.

Due to differing broadcast styles, the program type code definitions (i.e. Jazz, Rock, etc.) differ between RDS and RBDS:

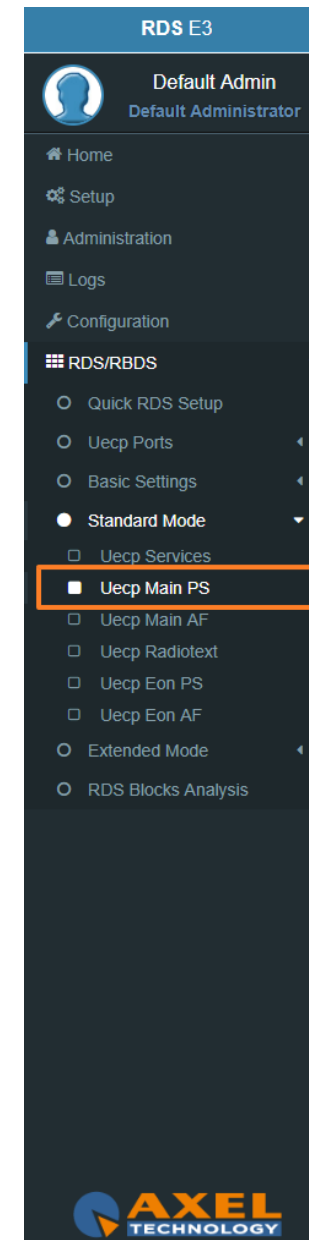
PTY Code	RDS Program Type	RBDS Program Type	PTY Code	RDS Program Type	RBDS Program Type
0	No program type or undefined	No program type or undefined	16	Weather	Rhythm and Blues
1	News	News	17	Finance	Soft Rhythm and Blues
2	Current Affairs	Information	18	Children's programs	Language
3	Information	Sports	19	Social Affairs	Religious Music
4	Sport	Talk	20	Religion	Religious Talk
5	Education	Rock	21	Phone In	Personality
6	Drama	Classic Rock	22	Travel	Public
7	Culture	Adult Hits	23	Leisure	College
8	Science	Soft Rock	24	Jazz Music	Unassigned
9	Varied	Top 40	25	Country Music	Unassigned
10	Pop Music	Country	26	National Music	Unassigned
11	Rock Music	Oldies	27	Oldies Music	Unassigned
12	M.O.R. Music	Soft	28	Folk Music	Unassigned
13	Light Classical	Nostalgia	29	Documentary	Weather
14	Serious Classical	Jazz	30	Alarm Test	Emergency Test
15	Other Music	Classical	31	Alarm	Emergency

PIN (Programme 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 programme time, to which is added the day of the month in order to avoid ambiguity.

Linkage

Linkage information provides the means by which several programme services, each characterised by its own PI code, may be treated by a receiver as a single service during times a common programme is carried. During such times each programme service retains its unique identity, i.e. the programme service must keep its



The screenshot shows the 'RDS E3' web interface. At the top, it says 'Default Admin' and 'Default Administrator'. The main menu includes: Home, Setup, Administration, Logs, Configuration, and RDS/RBDS. The RDS/RBDS menu is expanded, showing options: Quick RDS Setup, Uecp Ports, Basic Settings, Standard Mode (selected), Uecp Services, Uecp Main PS (highlighted with an orange box), Uecp Main AF, Uecp Radiotext, Uecp Eon PS, Uecp Eon AF, Extended Mode, and RDS Blocks Analysis. The AXEL TECHNOLOGY logo is visible at the bottom right of the interface.

designated **PI** code and its **AF** (Alternative Frequency) list(s), but may change programme related features such as **PS**, **PTY**, **RT**, **TP** and **TA** to reflect the common programme;

Linkage information is conveyed in the following four data elements:

Linkage			
LA	EG	ILS	LSN
Off	Off	Off	000

LA: linkage actuator

EG: extended generic index

ILS: international linkage standard

LSN: linkage set number

Slow Labelling Codes (SLC)

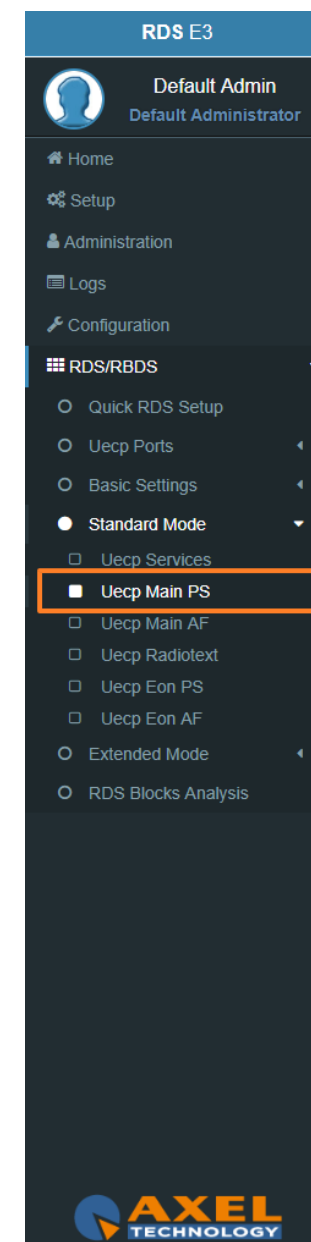
The **RDS** specification contains some additional slow labelling codes that are used to support various features. These are specified to be carried in the type **1A** group. In this section you can set **SLC** values.

Slow Labelling Codes			
SLC 0 (ECC)	SLC 1 (TMC)	SLC 2 (Paging)	SLC 3 (Language)
000	000	000	000
SLC 4 (n/a)	SLC 5 (n/a)	SLC 6 (Broad.)	SLC 7 (EWS)
000	000	000	000

SLC 0 (ECC) Extend Country Code : This code is only used when the **EPP** is used, it defined the selected country.

SLC 1 (TMC) Traffic Message Channel: This channel is used for road information, not used when **ODA** mode is used for **TMC** .

SLC 2 (Paging): This identification is used only with international multi operator.



The screenshot shows the RDS E3 user interface. At the top, it says 'RDS E3' and 'Default Admin Default Administrator'. The navigation menu includes: Home, Setup, Administration, Logs, Configuration, RDS/RBDS (expanded), Quick RDS Setup, Uecp Ports, Basic Settings, Standard Mode (selected), Uecp Services, Uecp Main PS (highlighted), Uecp Main AF, Uecp Radiotext, Uecp Eon PS, Uecp Eon AF, Extended Mode, and RDS Blocks Analysis. The Axel Technology logo is at the bottom.

SLC 3 (Language): This code allows to define language used by broadcaster.

SLC 4 (n/a): not assigned.

SLC 5 (n/a): not assigned.

SLC 6 (Broadcaster use): Data reserved for internal management of broadcaster.

SLC 7 (EWS) Emergency Warning System: his data identify chanel used for emergency or alert transmission.

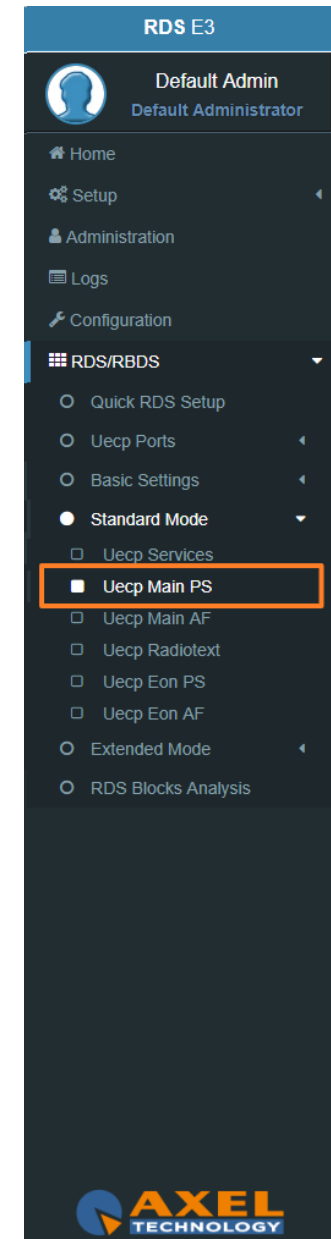
RBDS PI CALCULATOR (only if you are working on US soil)

Rbds PI Calculator

<input style="width: 95%; border: 1px solid #ccc;" type="text" value="CALL Letters"/>	<input style="width: 95%; border: 1px solid #ccc;" type="text" value="PI Code (Hex)"/>
<input style="background-color: #007bff; color: white; border: none; padding: 2px 10px;" type="button" value="Convert"/>	<input style="background-color: #007bff; color: white; border: none; padding: 2px 10px;" type="button" value="Convert"/>

CALL Letters: write the desired CALL Letters in this field, then click **Convert**. You will read the converted hexadecimal value in **PI Code (Ex)**.

PI Code (Hex): write the desired hexadecimal **PI Code** in this field. Then click **Convert**. You will read the converted value in **CALL Letters**.



3.6.4.3 UECP MAIN AF

Main Network Editing Controls

Main Network Editing Controls

Editing Dataset Index

DSN 1

Editing Program Service

Main PS

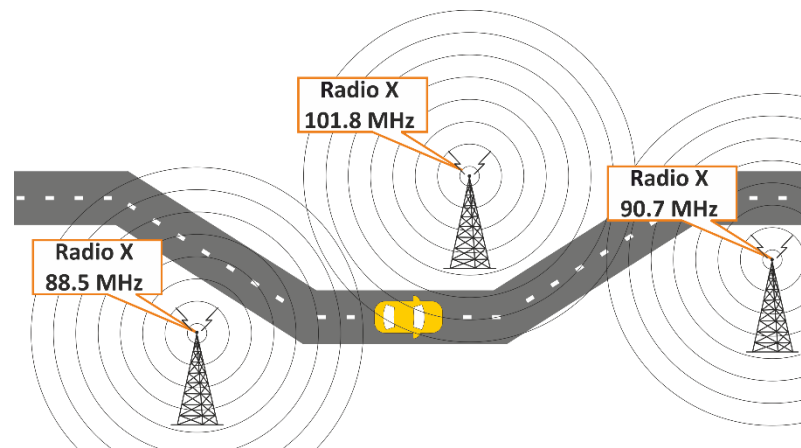
Editing Dataset Index: decide which Main AF List (**alternative frequencies**) you want to edit, select the related **DSN (Dataset Number)**.

Editing Program Service: You will see this parameter also in **UECP, EON, AF**. Here the parameter is not selectable because this is **AF** of the **MAIN Program Service**.

Alternative Frequencies

If the broadcasting radio station has more than one transmitter in its reaching area then mobile radio listeners can listen to the radio without interruption by the usage of radio receivers auto frequency shifting feature with the support of **RDS Alternative Frequency** feature of the transmitter. This application can be used if the radio receivers enables its **AF** support.

Radio X	Transmitter A	88.5 MHz
	Transmitter B	90.7 Mhz
	Transmitter C	101.8 MHz



RDS E3

Default Admin

Default Administrator

- Home
- Setup
- Administration
- Logs
- Configuration
- RDS/RBDS
 - Quick RDS Setup
 - Uecp Ports
 - Basic Settings
 - Standard Mode**
 - Uecp Services
 - Uecp Main PS
 - Uecp Main AF**
 - Uecp Radiotext
 - Uecp Eon PS
 - Uecp Eon AF
 - Extended Mode
 - RDS Blocks Analysis

If Radio X Station broadcasts with **RDS AF** feature, and if **AF** feature of the radio receiver of the moving vehicle is enabled then listener can listen continuously to that radio station without the need to change the frequency. Radio receivers with **RDS** feature automatically choose the strongest signal of the radio station. **AF** feature is the ideal system for the vehicles having long distance to go in order to listen uninterruptedly a radio station.

AF A method transmitted by **OA RDS** group can define 25 frequency transmitters of the same radio station.

AF B method can be applied if the number of frequency transmitters exceeds 25 or regional grouping is needed.

In the following list you can read **AF (alternative frequencies)** list of desired Tuned frequencies.

Alternative Frequencies		
AF Lists		
Lists	Tuned	
(5-B) 90.0	90.1	90.2 90.3 90.4
(5-B) 91.2	92.4	92.5 100.3 100.6
(2-B) 88.5	88.6	

You see the list of Tuned frequencies with their own **AF** list. **Black AF** are universal. **Blue AF** are regional. click on



to add a new row with **AF** list or click on an existing row to edit it. The following mask will be enabled:

Method	Tuned	AF List
A	100.0	101.0, 102.0, 103.0, 104.0, 105.0

Method: decide between **A/B**. The **B** method allows you to specify also the regionality of the **AF**.

The screenshot shows the RDS E3 administration interface. The sidebar menu includes options like Home, Setup, Administration, Logs, Configuration, and RDS/RBDS. Under RDS/RBDS, 'Uecp Main AF' is highlighted with an orange box. Other options include Quick RDS Setup, Uecp Ports, Basic Settings, Standard Mode, Uecp Services, Uecp Main PS, Uecp Radiotext, Uecp Eon PS, Uecp Eon AF, Extended Mode, and RDS Blocks Analysis.

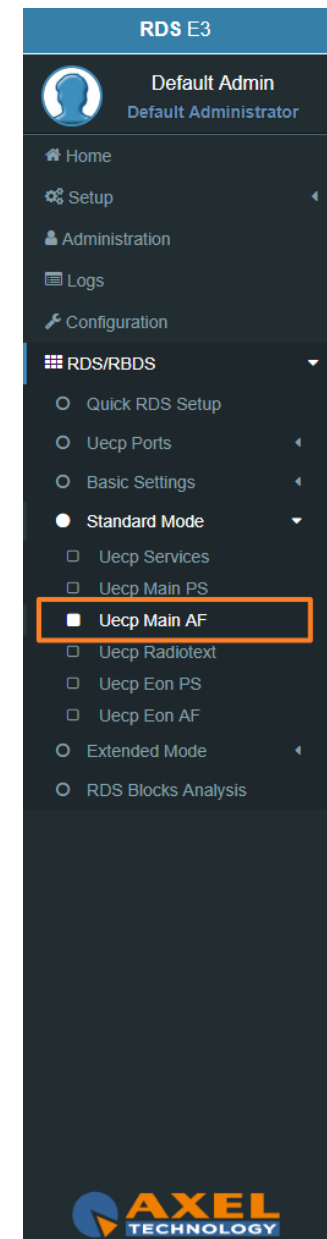
Tuned Freq: here the Main Tuned Freq.

AF List: in this list you see different alternative frequencies separated by a comma (,) and a space. If you want to specify that 90.2 frequency is regional. Type **90.2r**.

Add: click on add to confirm parameters and to add them in rows.

Remove: click on a row that you want to delete and click on remove

Update: select a row that you want to edit, change parameters and click **Update** to save changes.



3.6.4.4 UECP RADIOTEXT

Main Network Editing Controls

Main Network Editing Controls

Editing Dataset Index DSN 1	Editing Program Service Main PS
--------------------------------	------------------------------------

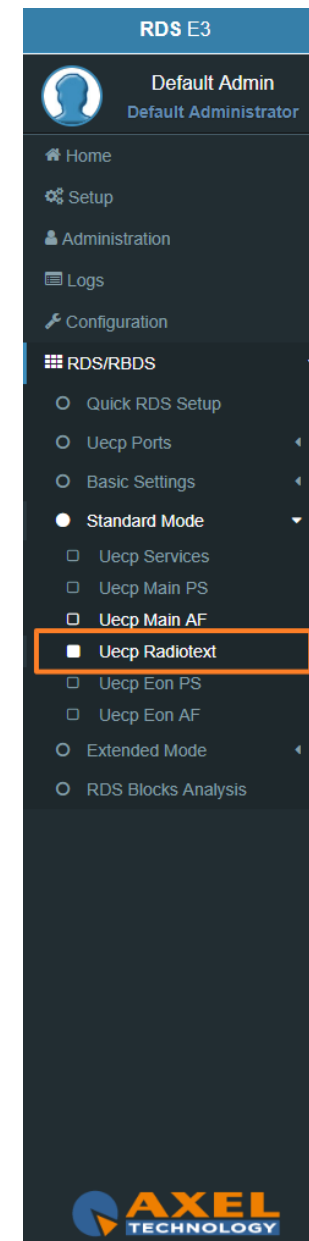
Editing Dataset Index: decide which RadioText you want to edit, select the related **DSN (Dataset Number)**.

Editing Program Service: Here the Program Service is not selectable because this is **AF** of the MAIN Program.

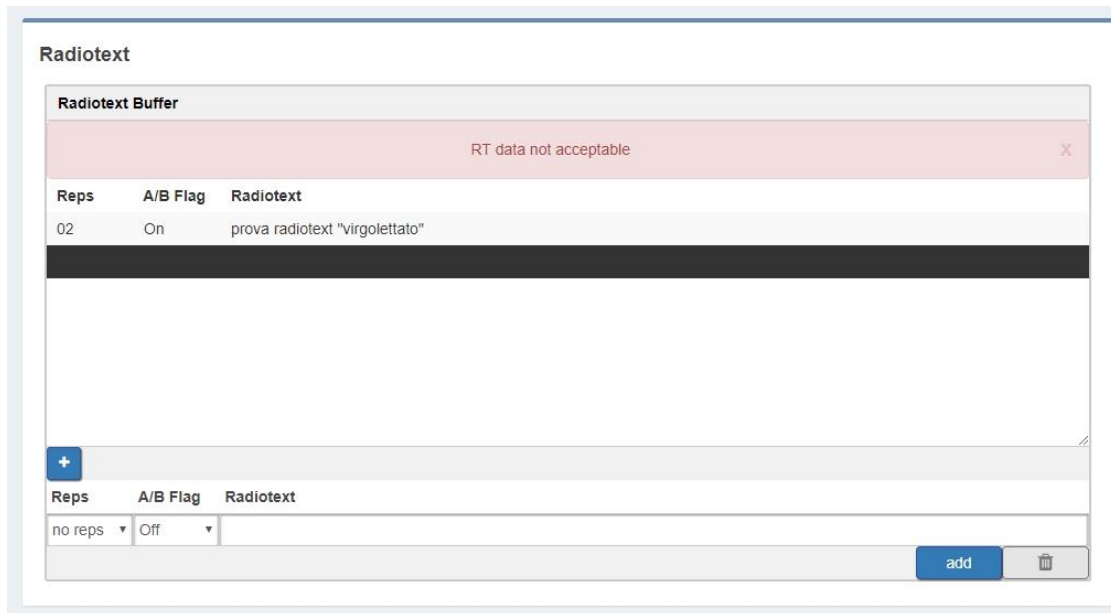
Radiotext

Most **RDS** radios can receive short messages which might include information about the presenter, station or programme you are listening to. The information will usually scroll across the display on a home tuner, but this could be distracting to a driver in a car, so the **RadioTEXT** message in a car **hi-fi** does not scroll.

This refers to text transmissions coded, primarily addressed to consumer home receivers, which would be equipped with suitable display facilities.



The text can be up to **64** characters long. if your text more than **64** characters you will get an error message. Watch the next figure.



Radiotext

Radiotext Buffer

RT data not acceptable

Reps	A/B Flag	Radiotext
02	On	prova radiotext "virgolettato"

+ Add new entry

Reps	A/B Flag	Radiotext
no reps	Off	

add

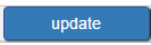
Reps: number of radiotext message repetitions

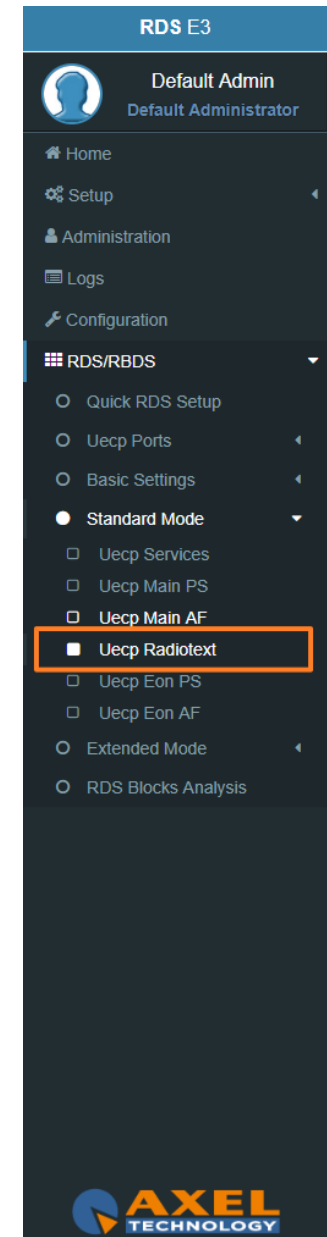
A/B Flag: The **A/B flag** is an important part of proper **radiotext** transmission. This flag is used to signal the receiver when a new text message is transmitted. When the receiver detects a change in the **A/B flag** state, the **radiotext** receiver buffer will be cleared, preventing the possibility of a mixture of old and new text messages being displayed on the receiver. In conclusion, the **A/B flag** should be enabled when multiple **RT (RadioText)** messages are scheduled, while it can be disabled in the event of a fixed **RT (RadioText)** broadcasting.

RadioText: RadioText message.

Add: after the new message creation click on send to start the RadioText transmission.

Remove: deletes the selected RadioText message

Update: , by selecting an existing RadioText row you can change it. To save new settings click on this button.



RDS E3

Default Admin
Default Administrator

- Home
- Setup
- Administration
- Logs
- Configuration
- RDS/RBDS**
 - Quick RDS Setup
 - Uecp Ports
 - Basic Settings
 - Standard Mode**
 - Uecp Services
 - Uecp Main PS
 - Uecp Main AF
 - Uecp Radiotext**
 - Uecp Eon PS
 - Uecp Eon AF
 - Extended Mode
 - RDS Blocks Analysis

AXEL TECHNOLOGY

3.6.4.1 UECP EON PS

EON PS This feature can be used to update the **PS (Program Service)** information stored in a receiver about program services.

EON Program Service

Eon Program Service

<div style="border: 1px solid #ccc; padding: 2px;">Editing Dataset Index</div> <div style="border: 1px solid #ccc; padding: 2px;">DSN 1</div>	<div style="border: 1px solid #ccc; padding: 2px;">Editing Program Service</div> <div style="border: 1px solid #ccc; padding: 2px;">Eon 1 PS</div>
---	--

Editing Dataset Index: decide which **Eon PS**(Program Service) you want to edit, select the related DSN (Dataset Number).

Editing Program Service: You will see this parameters also in **UECP, Eon, AF**. you can select between 10 different **EON** Program Services.

EON Basic Settings

Eon Basic Settings

<div style="border: 1px solid #ccc; padding: 2px;">PI</div> <div style="border: 1px solid #ccc; padding: 2px;">5001</div>	<div style="border: 1px solid #ccc; padding: 2px;">PS</div> <div style="border: 1px solid #ccc; padding: 2px;">NETWRK01</div>	
<div style="border: 1px solid #ccc; padding: 2px;">TP</div> <div style="border: 1px solid #ccc; padding: 2px;">Off</div>	<div style="border: 1px solid #ccc; padding: 2px;">TA</div> <div style="border: 1px solid #ccc; padding: 2px;">Off</div>	
<div style="border: 1px solid #ccc; padding: 2px;">PTY</div> <div style="border: 1px solid #ccc; padding: 2px;">No Program Type</div>		
<div style="border: 1px solid #ccc; padding: 2px;">PIN Day</div> <div style="border: 1px solid #ccc; padding: 2px;">0</div>	<div style="border: 1px solid #ccc; padding: 2px;">PIN Hour</div> <div style="border: 1px solid #ccc; padding: 2px;">0</div>	<div style="border: 1px solid #ccc; padding: 2px;">PIN Minute</div> <div style="border: 1px solid #ccc; padding: 2px;">0</div>

PI(Program Identification): type the PI Code.

PS(Program Station): type the Program Station Name.

RDS E3

Default Admin

Default Administrator

- [Home](#)
- [Setup](#)
- [Administration](#)
- [Logs](#)
- [Configuration](#)
- [RDS/RBDS](#)
- [Quick RDS Setup](#)
- [Uecp Ports](#)
- [Basic Settings](#)
- [Standard Mode](#)
- Uecp Services
- Uecp Main PS
- Uecp Main AF
- Uecp Radiotext
- Uecp Eon PS
- Uecp Eon AF
- [Extended Mode](#)
- [RDS Blocks Analysis](#)

TP(Traffic Program): On/Off

TA(Traffic Announcement): On/Off

PTY: selectable value between: Pop Music, Rock Music, Culture, Science...

PTYN: type a desired description for the program.

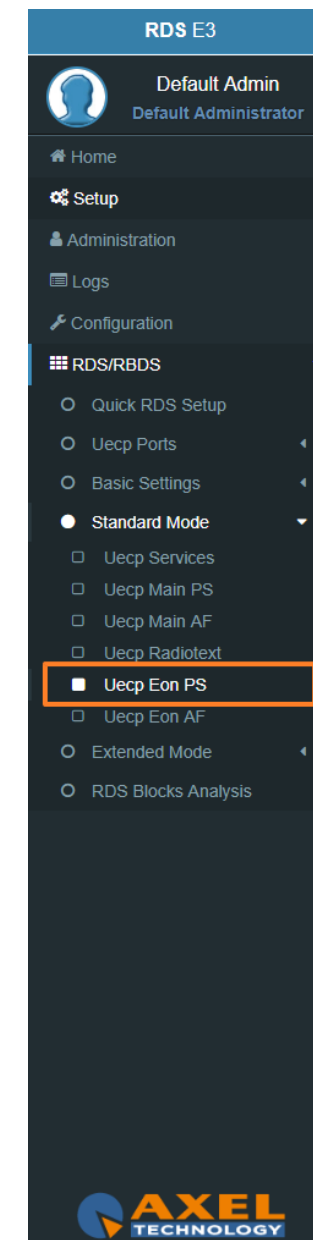
PIN Day: if you want to schedule a special PTY insert here the month day. From 01 to 31.

PIN Hour: if you want to schedule a special PTY insert here the desired hour (HH). Possible. From 00 to 23.

PIN Minute: if you want to schedule a special PTY insert here the desired minute (MM). From 00 to 59.

Music/Speech: select here if you have Music program or a Speech program.

Decoder Information: select the audio decoder information.



Eon Linkage

Linkage information provides the means by which several programme services, each characterised by its own **PI** code, may be treated by a receiver as a single service during times a common programme is carried. During such times each programme service retains its unique identity, i.e. the programme service must keep its designated **PI** code and its **AF (Alternative Frequency)** list(s), but may change programme related features such as **PS, PTY, RT, TP** and **TA** to reflect the common programme.

Linkage information is conveyed in the following four data elements:

Eon Linkage			
LA	EG	ILS	LSN
Off	Off	Off	000

LA: linkage actuator.

EG: extended generic index.

ILS: international linkage standard.

LSN: linkage set number.

3.6.4.2 UECP EON AF

EON (Enhanced Other Networks Information) makes it possible to transmit an information from other stations. This could be used by a radio station, which doesn't offer street traffic program content. If an alternative radio station with **TP (traffic program)** content is available, the tuner temporary switches automatically to the other station during traffic program announcements.

Eon Editing Controls

Eon Editing Controls

Editing Dataset Index

DSN 1

Editing Program Service

Eon 1 PS

Editing Dataset Index: decide which **EON AF** (alternative frequencies) you want to edit, select the related **DSN** (Dataset Number).

Editing Program Service: You will see this parameter also in **UECP Main AF**, you can select between 10 different **EON** Program Services.

EON Alternative Frequencies

In the following list you can read EON AF (alternative frequencies) list of desired Tuned frequencies.

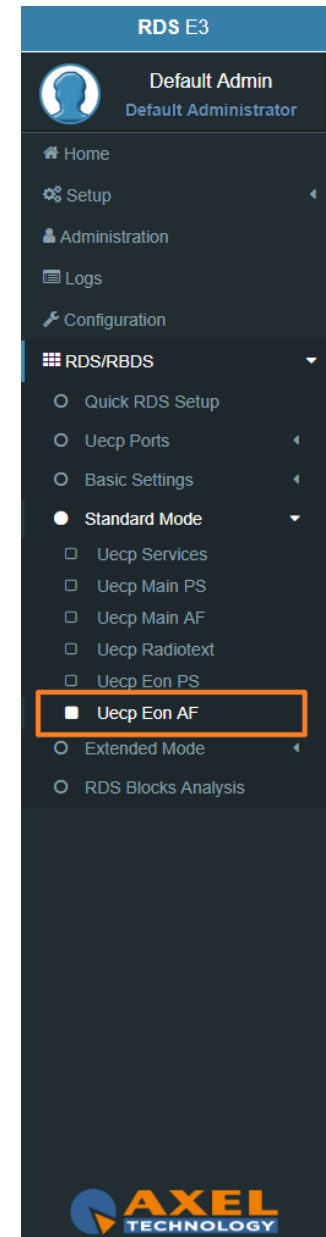
Eon Alternative Frequencies

Eon AF Lists		
Lists	Tuned	
(4-A)	87.9	91.6 93.5 95.9

+

Method	Tuned Freq.	AF List
A		

add
✖



+		
Method	Tuned	AF List
A	87.9	91.6, 93.5, 95.9

Method: decide between **A, Freq Map 1, Freq Map 2, Freq Map 3.**

Tuned Freq: here the Main Tuned Freq.


AF List: in this list you see different alternative frequencies.

Add: click on add to confirm parameters and to add them in rows.

Remove: click on a row that you want to delete and click on remove

Update: select a row that you want to edit, change parameters and click **Update** to save changes.


RDS E3



Default Admin

Default Administrator

- [Home](#)
- [Setup](#)
- [Administration](#)
- [Logs](#)
- [Configuration](#)
- RDS/RBDS
- [Quick RDS Setup](#)
- [Uecp Ports](#)
- [Basic Settings](#)
- Standard Mode
- Uecp Services
- Uecp Main PS
- Uecp Main AF
- Uecp Radiotext
- Uecp Eon PS
- Uecp Eon AF
- [Extended Mode](#)
- [RDS Blocks Analysis](#)

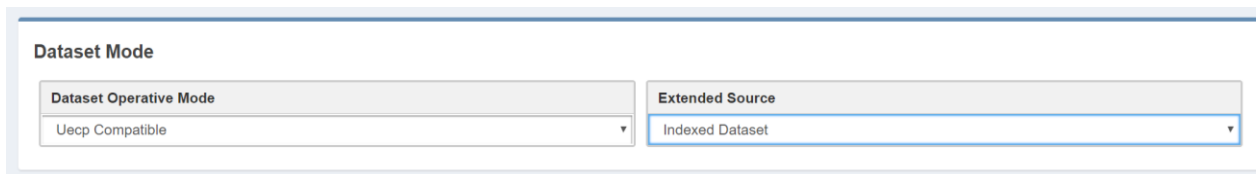


3.6.5 EXTENDED MODE

3.6.5.1 EXTENDED DATASET

Extended Dataset is a special section useful to enable **RDS/RBDS** Features without the using of **UECP** standard.

Dataset Mode



Dataset Operative Mode

UECP Compatible: (the Dataset rules are those defined in **UECP Services** section). In this case the Extended Source is disactive.

Extended Mode: (the Dataset rules could be The *Extend Source>Indexed Dataset* or the *Extended Source>Alternative Dataset* or the *Extended Source>REST Command* or the *SMB/SAMBA Share* explained in following lines.

Extended Source:

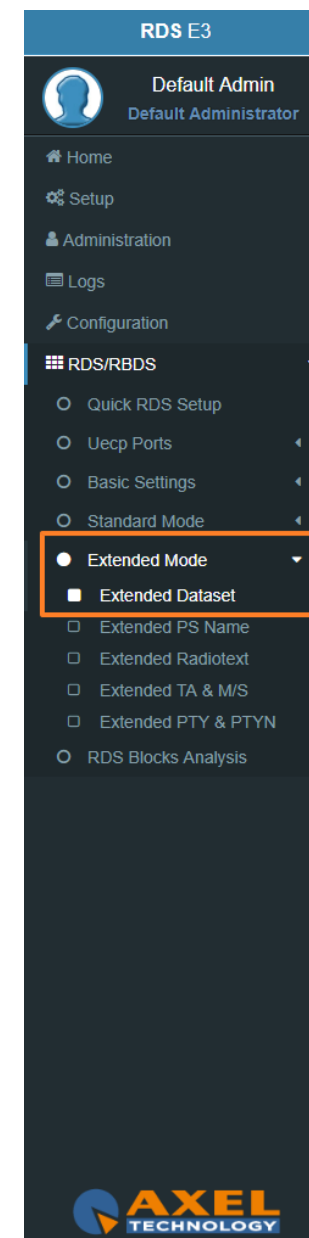
1. **Indexed Dataset:** if Dataset Operative Mode > Extended Mode, the Dataset choice works with a special binary code created by **GPI (4,5,6)** Events.

GPI Positive Logic:

0 = No GPI event 1 = GPI event Red number = Aired Dataset

GPI Negative Logic:

1 = No GPI event 0 = GPI event Red number = Aired Dataset



GPI 6	GPI 5	GPI 4	DATASET
0	0	0	1
0	0	1	2
0	1	0	3
0	1	1	4
1	0	0	5
1	0	1	6
1	1	0	7
1	1	1	8

2. **Alternative Dataset:** if *Dataset Operative Mode > Extended Mode* you can write a Dataset in *Alternative Mode > Alternative Dataset*.
3. **REST Command:** if Dataset Operative Mode > Extended Mode the dataset will be chosen by **REST** command.
4. **SMB/SAMBA Share:** if *Dataset Operative Mode > Extended Mode* the dataset will be chosen by *SMB/SAMBA* server.

Alternative Mode

Alternative Mode

Alternative Dataset

Alternative Dataset On

Alternative Dataset: Select between available Datasets the one that will be aired in the following case: *Dataset Operative Mode > Extended Mode* and *Extended Source>Alternative Dataset*.

Active Dataset On: *Dataset Operative Mode > Extended Mode* and *Extended Source >Alternative Dataset*. If Select the **GPI** that actives.

the **Dataset** in the specified **GPI** Event. The control does not work if the related **GPI Event** is masked.

3.6.5.2 EXTENDED PS NAME

PSN Mode

PSN Mode

<div style="border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;"> PSN Operative Mode Uecp Compatible </div> <div style="border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;"> Extended PSN Buffer Mode Scrolling </div> <div style="border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;"> Extended PSN Scrolling Steps 2 </div> <div style="border: 1px solid #ccc; padding: 2px;"> Extended PSN Refresh Time Off </div>	<div style="border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;"> Extended PSN Source REST Command </div> <div style="border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;"> Extended PSN Scrolling Speed Normal </div> <div style="border: 1px solid #ccc; padding: 2px;"> Extended PSN Auto Return Mode Disabled </div>
--	--

PSN Operative Mode:

UECP Compatible (the aired PSN is that defined in **UECP Main PS** section).

Extended Mode the aired PSN is the one defined by REST Command or the one defined in the below section Extended PSN Test.

Extended PSN Source: REST Command or SMB/SAMBA Share.

Extended PSN Buffer Mode: Scrolling

Extended PSN Scrolling Speed: Scrolling speed. Choose between Fastest, Fast, Normal, Slow, Slowest.

Extended PSN Scrolling Steps: Scrolling steps, the number of character scrolling step. From 1 to 8.

Extended PSN Auto Return Mode:

Disabled (there is the PSN repetition)

After 1 Loops (After 1 loop the PSN repetition stops)

After 2 Loops (After 2 loops the PSN repetition stops)

After 3 Loops (After 3 loops the repetition stops)

After 4 Loops (After 4 loops the repetition stops)

After 5 Loops (After 5 loops the repetition stops).

RDS E3

Default Admin

Default Administrator

- [Home](#)
- [Setup](#)
- [Administration](#)
- [Logs](#)
- [Configuration](#)
- [RDS/RBDS](#)
- Quick RDS Setup
- Uecp Ports
- Basic Settings
- Standard Mode
- Extended Mode
- Extended Dataset
- Extended PS Name
- Extended Radiotext
- Extended TA & M/S
- Extended PTY & PTYN
- RDS Blocks Analysis

Extended PSN Test

Extended PSN Test

PS Name

PSN Name: Type here the desired extended PS Name. Then click **SEND** to air it.

3.6.5.3 EXTENDED RADIOTEXT

Radiotext Mode

Radiotext Mode

RT Operative Mode Extended Mode	RT Extended Source SMB/SAMBA Share	Extended RT Refresh Time Off
RT+		
Auto-generated RT+ Enhanced RT+ disable		

RT Operative Mode:

UECP Compatible (the aired RadioText is that defined in **UECP Radiotext** section).

Extended Mode the aired Radiotext is the one defined by the REST Command or the value will be the one defined in the below section *Extended RT Test*.

RT Extended Source: REST Command or *SMB/SAMBA Share*.

RT+: RT+ Service will be automatically generated using every tagged data available.

Important: this service requires 3A and 12A groups in the group sequence list (in Standard Mode - Uecp Services page).

RDS E3

Default Admin

Default Administrator

- Home
- Setup
- Administration
- Logs
- Configuration
- RDS/RBDS
 - Quick RDS Setup
 - Uecp Ports
 - Basic Settings
 - Standard Mode
 - Extended Mode
 - Extended Dataset
 - Extended PS Name
 - Extended Radiotext
 - Extended TA & M/S
 - Extended PTY & PTYN
 - RDS Blocks Analysis

Extended RT Test

Extended RT Test

Radio Text Edit

Radio Text Edit: Type here the desired extended Radiotext. Then click **SEND** to air it.

3.6.5.4 EXTENDED TA & M/S

M/S Mode

M/S Mode

M/S Operative Mode

Uecp Compatible

M/S Extended Source

GPI 1 Event

M/S Operative Mode:

UECP Compatible (the aired Music/Speech value is that defined in **UECP Main PS** section).

Extended Mode the aired Music/Speech value is the one defined by GPI, or by REST Command or the value will be the one defined in the below section **Extended M/S & TA Test** section.

M/S Extended Source:

GPI (1,2,3,4,5,6) Event:

GPI EVENT NOT DETECTED = MUSIC

GPI EVENT DETECTED = SPEECH

REST Command: you can decide if Music or Speech by REST command or by the below **Extended M/S & TA Test** section.


SMB/SAMBA Share: you can decide if Music or Speech by the playout XML File.

RDS E3

Default Admin

Default Administrator

- Home
- Setup
- Administration
- Logs
- Configuration
- RDS/RBDS
 - Quick RDS Setup
 - Uecp Ports
 - Basic Settings
 - Standard Mode
 - Extended Mode**
 - Extended Dataset
 - Extended PS Name
 - Extended Radiotext
 - Extended TA & M/S**
 - Extended PTY & PTYN
 - RDS Blocks Analysis



Text Announcement Mode

Text Announcement Mode

<div style="border: 1px solid #ccc; padding: 2px;"> <p>TA Operative Mode</p> <p>Uecp Compatible</p> </div>	<div style="border: 1px solid #ccc; padding: 2px;"> <p>TA Extended Source</p> <p>GPI 1 Event</p> </div>
--	---

TA Operative Mode:

UECP Compatible (the aired TA on/off value is that defined in **UECP Main PS** section).

Extended Mode (the aired Music/Speech value is the one defined by GPI, or by REST Command or the value will be the one defined in the below section **Extended M/S & TA Test** section).

TA Extended Source:

GPI (1,2,3,4,5,6) Event:

GPI EVENT NOT DETECTED = TA OFF

GPI EVENT DETECTED = TA ON

REST Command: you can decide if TA ON or TA OFF by REST command or by the below **Extended M/S & TA Test** section.

SMB/SAMBA Share : you can decide if TA ON or TA OFF by the playout XML File.

Extended M/S & TA REST Test

Extended M/S & TA REST Test

<div style="border: 1px solid #ccc; padding: 2px;"> <p>Music/Speech</p> <p>Speech</p> </div>	<div style="border: 1px solid #ccc; padding: 2px;"> <p>Traffic Announcement</p> <p>Off</p> </div>
--	---

Music/Speech: airs the Music/Speech only If **TA Operative Mode** is in Extended Mode.

Traffic Announcement: airs the Off/On only If **TA Operative Mode** is in Extended Mode.

RDS E3

Default Admin

Default Administrator

- [Home](#)
- [Setup](#)
- [Administration](#)
- [Logs](#)
- [Configuration](#)
- RDS/RBDS**
 - [Quick RDS Setup](#)
 - [Uecp Ports](#)
 - [Basic Settings](#)
 - [Standard Mode](#)
 - Extended Mode**
 - Extended Dataset
 - Extended PS Name
 - Extended Radiotext
 - Extended TA & M/S**
 - Extended PTY & PTYN
 - [RDS Blocks Analysis](#)

Eon TA Mode

Eon TA 1 Operative Mode	Eon TA 1 Extended Source
Extended Mode	GPI 1 Event

For all the lines the logic works as the Text Announcement Mode. The Extended EON TA is editable from **GPI** and **REST Command**. The following example is an example that summarize all **EON TA**:

EON TA X OPERATIVE MODE:

UECP Compatible (the aired EON TA on/off value is that defined in **UECP EON PS** section).

Extended Mode (the aired EON TA on/off value is the one defined by GPI or by REST Command).

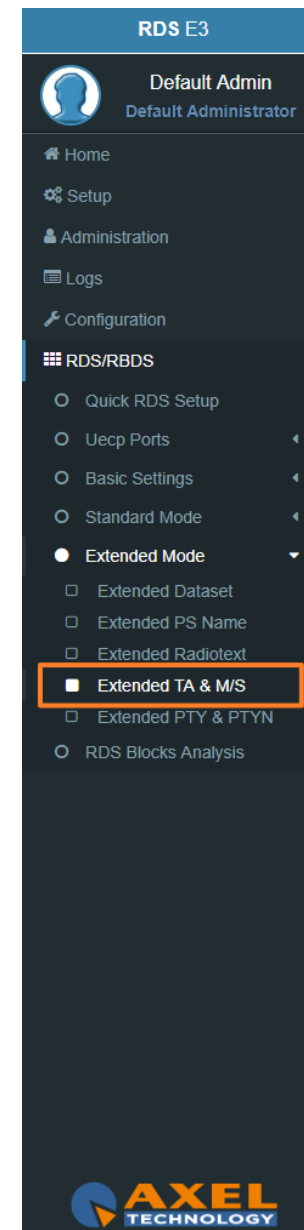
EON TA X EXTENDED SOURCE:

GPI (1,2,3,4,5,6) Event:

GPI EVENT NOT DETECTED = EON TA OFF

GPI EVENT DETECTED = EON TA ON

REST Command: you can decide if **TA ON** or **TA OFF** by **REST command**.



The screenshot shows the RDS E3 web interface. At the top, it says "RDS E3" and "Default Admin" with "Default Administrator" below it. The navigation menu includes: Home, Setup, Administration, Logs, Configuration, RDS/RBDS (expanded), Quick RDS Setup, Uecp Ports, Basic Settings, Standard Mode, Extended Mode (selected), Extended Dataset, Extended PS Name, Extended Radiotext, Extended TA & M/S (highlighted with an orange box), Extended PTY & PTYN, and RDS Blocks Analysis. The Axel Technology logo is at the bottom.

3.6.5.5 EXTENDED PTY e PTYN

PTY Mode

PTY Mode

<div style="border: 1px solid #ccc; padding: 2px;"> <p>PTY Operative Mode</p> <p>Uecp Compatible</p> </div>	<div style="border: 1px solid #ccc; padding: 2px;"> <p>PTY Extended Source</p> <p>REST Command</p> </div>
---	---

PTY Operative Mode:

UECP Compatible (the aired PTY value is that defined in **UECP MAIN PS** section).

Extended Mode: (the aired PTY value is the one defined by **REST Command**).

PTY Extended Source: REST Command or SMB/SAMBA.

PTYN Mode

PTYN Mode

<div style="border: 1px solid #ccc; padding: 2px;"> <p>PTYN Operative Mode</p> <p>Uecp Compatible</p> </div>	<div style="border: 1px solid #ccc; padding: 2px;"> <p>PTYN Extended Source</p> <p>REST Command</p> </div>
--	--

PTYN Operative Mode:

UECP Compatible (the aired PTYN value is that defined in **UECP MAIN PS** section).

Extended Mode (the aired PTY value is the one defined by REST Command or by the following section Extended PTYN Test).

PTYN Extended Source: REST Command or SMB/SAMBA.

Extended PTYN Test

Extended PTYN Test

PTYN Edit

PTYN Edit: type here the desired Extended **PTYN** value and then click on **Send**.

RDS E3

Default Admin

Default Administrator

- [Home](#)
- [Setup](#)
- [Administration](#)
- [Logs](#)
- [Configuration](#)
- [RDS/RBDS](#)
 - [Quick RDS Setup](#)
 - [Uecp Ports](#)
 - [Basic Settings](#)
 - [Standard Mode](#)
 - [Extended Mode](#)
 - Extended Dataset
 - Extended PS Name
 - Extended Radiotext
 - Extended TA & M/S
 - Extended PTY & PTYN**
 - [RDS Blocks Analysis](#)

3.6.6 RDS BLOCKS ANALYSIS

From the following panel you can read for the statistics related to each transmitted group:

RDS GROUPS STATISTIC



RDS E3

Default Admin

Default Administrator

- [Home](#)
- [Setup](#)
- [Administration](#)
- [Logs](#)
- [Configuration](#)
- RDS/RBDS
 - Quick RDS Setup
 - Uecp Ports
 - Basic Settings
 - Standard Mode
 - Extended Mode
 - Extended Dataset
 - Extended PS Name
 - Extended Radiotext
 - Extended TA & M/S
 - Extended PTY & PTYN
 - RDS Blocks Analysis

4. TECHNICAL SPECS

PSU	
Power Supply	90-260 Vac / 47-63 Hz 15W
MPX Input – MPX	
Connector	Unbalanced on 1 BNC – EMI Suppression
Input Impedance	50K
Adjustable Nominal Input Level (Sensitivity)	Software Adjustable -9dBm to +15,0dBm
Range of Level	-21,0dBu ÷ +24,0dBu
Max Input Level	+24,0dBu
A/D Conversion	Texas PCM4202
MPX Output + RDS	
Connector	Unbalanced on 2 BNC – EMI Suppression
Output Impedance	10 Ω
Load Impedance	600 Ω or greater
Maximum Load Capacitance 5nF	192KHz
D/A Conversion	Texas PCM 1796
Composite output level	-9,0dBm to +15,0 dBm (0,1 dBm step)
S/N	≥ 85dB
THD	≤ 0.01%
Separation	≥ 65dB
MPX & RDS Signal	
Pilot Frequency	19 KHz +/- 1Hz
Pilot Injection	Adj from -25,0dB a -15,5dB (0,1 dB step); 6 to 18% of total deviation
Pilot Stability	±10 ppm (-10 to +55°C)
Pilot Distortion	0,05% (typical)
Pilot Distortion + Noise	0,068% (on 100KHz band)
Composite out THD	0,01% (typical on the whole band)
Stereo Separation	>70 dB (typical on the whole band)


Linear Crosstalk Main to Sub / Sub to Main	>70 dB (minimum)	
Digital filtering / band	30 Hz to 15 kHz (-0,1dB), 17 kHz (-70 dB), 19 kHz (-100 dB)	
57 kHz (RDS/RBDS) Protection	Better than 51 dB	
Pre-emphasis	Off, 50uS, 75uS (+-0,1dB)	
Freq Response	±0,3 dB (30Hz-15kHz)	
Operation	Mono / Stereo	
MPX/RDS Output	Adj from -10,0 dB to 15,0 dB (0,1 dB step)	
Signal/Noise Ratio	≥ 85 dB (on 100 kHz band)	
Carrier Suppression	> 85 dB	
System		
GPIO Inputs/Outputs	6 GPI / 4 GPO	
Communication Port	2xRS232, 2xUSB, 1xLAN	
Synchronization	Ext(Pilot Mpx)/ Int/ Auto	
Synchronization Monitoring	Yes	
RDS Level adjustment	Digitally controlled	
Phase adjustment	Yes, 0 ÷ 359.9°	
Separate outputs for RDS+MPX and for RDS only	Yes	
Command to activate the RDS SCA	Yes	
Side Chain Mode, Loop through mode, Bypass feature	Yes	
RDS Subcarrier	100% Digitally Generated Shape	
CENELEC – EN50067 compliant –	Yes	
Accurate Clock Time (CT) Sync with Internet Connection	Yes	
Remote TA actuation for Traffic Announcements	Yes	
GPS module for automatic synchronization of the built-in Real Time Clock (RTC)	Optional (USB External)	
RDS decoder for rebroadcasting RDS Data	Yes	
Firmware can be upgraded in the field	Yes	
Front-panel Colour TFT Display	No (RDS E3)	Yes (RDS E5)
Data may be entered on-site with Front-panel Buttons	No (RDS E3)	Yes (RDS E5)
Front Panel Leds	40	
Operating Temperature	0°C ÷ 50°C	

RDS Features	
Group supported	All
Group Sequence	Configurable
PS	8 DSN x MAIN+10 PSN
PI	8 DSN x MAIN+10 PSN
PIN & PTY	RDS/RBDS
AF Method A	up to 1024 (64 lists)
AF Method B	up to 1024 (64 lists)
RT	Yes, 32 messages
RT rate adjustment	Group Sequence
RT+ for songs and content tagging	Yes
TP	Yes
TA Control	Command, Software, GPI
PTYN	Yes
EON	10 PSN
CT	Yes
TMC, EWS, IH, TDC	Yes
Free Format Groups (FFG)	Yes
Open Data Application (ODA)	Yes
PS Scrolling	Yes
Scrolling by characters, by word, auto centre, truncate long words	Yes (Characters – from 1 up to 8)
Communication	
Connection with Automation Software	Yes
Network Connectivity	4 TCP ports / 4 UDP / 1 SNMP
PSN Scheduler	Yes
Configuration Software	Web Server, FTP
Password Protection	Yes
ASCII Protocol	Configuration Messages
REST Command	Yes
Alert notifications on user-defined events via SNMP traps or E-mails	Yes
Embedded SNMP agent permitting active management tasks	Yes

Supported Network Protocols	HTTP, SMTP, UDP, TCP, NTP, FTP
UECP Protocol	EBU SPB490 Ver.7.05
PI Calculator	Yes
RDS 2.0 Ready	Yes
Dimensions	
Dimensions (W; H; D)	485 x 44 x 240 mm
Weight	< 3Kg




Dichiarazione di conformità


Il sottoscritto Giuseppe Vaccari	
In qualità di legale rappresentante della ditta Axel Technology S.r.l.	
con sede in: Via Caduti di Sabbiuno, 6/F – 40011 – Anzola Emilia (BO)	
Partita IVA: IT01735031203	
Dichiara	
che il prodotto: Codificatore RDS/RBDS digitale. n°8 Dataset. UECP v.7.05. ODA, TMC, IH, RT, RT+. Scheduler PS, RT, PTY. Ethernet, Web Server per la completa programmazione dell' encoder, SNMP v2.0. 6 GPI, 4 Relays. Interfaccia per regie automatiche e GPS.	
Modello e/o codice: RDS E3	
Data Fabbricazione: vedi etichetta sul prodotto	Numero di serie: vedi etichetta sul prodotto
È stato costruito rispettando le seguenti direttive e norme:	
<ul style="list-style-type: none">• Direttiva 2014/35/UE nota come "Direttiva bassa tensione"• Direttiva 2014/30/UE nota come "Direttiva compatibilità elettromagnetica"• Direttiva 2011/65/CE nota come "RoHS"• Direttiva delegata (UE) 2015/863 della commissione del 31 marzo 2015 recante modifica dell'allegato II della direttiva 2011/65/UE• Direttiva 2012/19/UE nota come "RAEE"• Direttiva 2001/95/CE nota "Sicurezza generale dei prodotti"• UNI EN ISO 7010:2021 Titolo: Segni grafici - Colori e segnali di sicurezza - Segnali di sicurezza registrati• EN 62368-1:2018 - relativa alla sicurezza elettrica per le apparecchiature informatiche e i prodotti audio/video• IEC 62311:2019 - Valutazione degli apparecchi elettronici ed elettrici in relazione alle restrizioni per l'esposizione umana ai campi elettromagnetici (0 Hz – 300 GHz)• EN 55032:2015+A1:2020 - Compatibilità elettromagnetica delle apparecchiature multimediali. Requisiti di emissione• EN 55103-2:2010 Norme di famiglie di prodotto per apparecchi audio, video, audiovisivi e di comando di luci da intrattenimento per uso professionale - Parte 2: Immunità.• EN 60065:2019 Apparecchi audio, video e apparecchi elettronici similari Requisiti di sicurezza.• EN 61000-6-1:2016 – EMC – Immunità per ambienti residenziali, commerciali e industria leggera.• EN 61000-6-3:2020 – EMC – Emissione per ambienti residenziali, commerciali e industria leggera.• EN 60950-1:2014 – Sicurezza degli apparati ITE (Information Technology Equipment)• EN 55024:2017 Apparecchiature per la tecnologia dell'informazione - Caratteristiche di immunità Limiti e metodi di misura.• EN IEC 63000:2018 Nuovo standard armonizzato per dimostrare la conformità RoHS• EN 55032:2015+A11:2020 Compatibilità elettromagnetica delle apparecchiature multimediali - Requisiti di emissione• EN 55035:2017 - Compatibilità elettromagnetica delle apparecchiature multimediali - Requisiti di immunità	
Ed è quindi conforme alle direttive e normative vigenti.	
La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.	
Data: 15/6/2023	Firma: 
Luogo: ANZOLA DELL'EMILIA (BO) - ITALIA	




Dichiarazione di conformità

Il sottoscritto Giuseppe Vaccari	
In qualità di legale rappresentante della ditta Axel Technology S.r.l.	
con sede in: Via Caduti di Sabbiuno, 6/F – 40011 – Anzola Emilia (BO)	
Partita IVA: IT01735031203	
Dichiara	
che il prodotto: Codificatore RDS/RBDS digitale. n°8 Dataset. UECP v.7.05. ODA, TMC, IH, RT, RT+. Scheduler PS, RT, PTY. Ethernet, Web Server per la completa programmazione dell' encoder, SNMP v2.0. 6 GPI, 4 Relays. Interfaccia per regie automatiche e GPS. Display TFT Hi-Res.	
Modello e/o codice: RDS E5	
Data Fabbricazione: vedi etichetta sul prodotto	Numero di serie: vedi etichetta sul prodotto
È stato costruito rispettando le seguenti direttive e norme:	
<ul style="list-style-type: none"> • Direttiva 2014/35/UE nota come "Direttiva bassa tensione" • Direttiva 2014/30/UE nota come "Direttiva compatibilità elettromagnetica" • Direttiva 2011/65/CE nota come "RoHS" • Direttiva delegata (UE) 2015/863 della commissione del 31 marzo 2015 recante modifica dell'allegato II della direttiva 2011/65/UE • Direttiva 2012/19/UE nota come "RAEE" • Direttiva 2001/95/CE nota "Sicurezza generale dei prodotti" • UNI EN ISO 7010:2021 Titolo: Segni grafici - Colori e segnali di sicurezza - Segnali di sicurezza registrati • EN 62368-1:2018 - relativa alla sicurezza elettrica per le apparecchiature informatiche e i prodotti audio/video • IEC 62311:2019 - Valutazione degli apparecchi elettronici ed elettrici in relazione alle restrizioni per l'esposizione umana ai campi elettromagnetici (0 Hz – 300 GHz) • EN 55032:2015+A1:2020 - Compatibilità elettromagnetica delle apparecchiature multimediali. Requisiti di emissione • EN 55103-2:2010 Norme di famiglie di prodotto per apparecchi audio, video, audiovisivi e di comando di luci da intrattenimento per uso professionale - Parte 2: Immunità. • EN 60065:2019 Apparecchi audio, video e apparecchi elettronici similari Requisiti di sicurezza. • EN 61000-6-1:2016 – EMC – Immunità per ambienti residenziali, commerciali e industria leggera. • EN 61000-6-3:2020 – EMC – Emissione per ambienti residenziali, commerciali e industria leggera. • EN 60950-1:2014 – Sicurezza degli apparati ITE (Information Technology Equipment) • EN 55024:2017 Apparecchiature per la tecnologia dell'informazione - Caratteristiche di immunità Limiti e metodi di misura. • EN IEC 63000:2018 Nuovo standard armonizzato per dimostrare la conformità RoHS • EN 55032:2015+A11:2020 Compatibilità elettromagnetica delle apparecchiature multimediali - Requisiti di emissione • EN 55035:2017 - Compatibilità elettromagnetica delle apparecchiature multimediali - Requisiti di immunità 	
Ed è quindi conforme alle direttive e normative vigenti.	
La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.	
Data: <u>15/6/2023</u>	Firma: 
Luogo: <u>ANZOLA DELL'EMILIA (BO) - ITALIA</u>	

CE Declaration of Conformity

The undersigned Giuseppe Vaccari	
As legal representative of the company Axel Technology Srl	
based in: Via Caduti di Sabbiuno, 6/F – 40011 – Anzola Emilia (BO)	
VAT number: IT01735031203	
<i>declares</i>	
that the product: Digital RDS/RBDS encoder. n°8 Datasets. UECP v.7.05. ODA, TMC, IH, RT, RT+. PS, RT, PTY Scheduler. Ethernet, Web Server for complete programming of the encoder, SNMP v2.0. 6 GPIs, 4 Relays. Interface for automatic directions and GPS.	
Model and/or code: RDS E3	
Date of manufacture: see label on the product	Serial number: see label on the product
It was built in compliance with the following directives and standards:	
<ul style="list-style-type: none"> • Directive 2014/35/EU known as the "Low Voltage Directive" • Directive 2014/30/EU known as the "Electromagnetic Compatibility Directive" • Directive 2011/65/EC known as "RoHS" • Commission Delegated Directive (EU) 2015/863 of 31 March 2015 amending Annex II of Directive 2011/65/EU • Directive 2012/19/EU known as "WEEE" • Directive 2001/95/EC known as "General product safety" • UNI EN ISO 7010:2021 Title: Graphic signs - Colors and safety signs - Registered safety signs • EN 62368-1:2018 - relating to electrical safety for computer equipment and audio/video products • IEC 62311:2019 - Evaluation of electronic and electrical equipment with regard to restrictions on human exposure to electromagnetic fields (0 Hz – 300 GHz) • EN 55032:2015+A1:2020 - Electromagnetic compatibility of multimedia equipment. Issue requirements • EN 55103-2:2010 Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Part 2: Immunity. • EN 60065:2019 Audio, video and similar electronic equipment Safety requirements. • EN 61000-6-1:2016 – EMC – Immunity for residential, commercial and light industry environments. • EN 61000-6-3:2020 – EMC – Emission for residential, commercial and light industry environments. • EN 60950-1:2014 – Safety of ITE (Information Technology Equipment) • EN 55024:2017 Information technology equipment - Immunity characteristics Limits and methods of measurement. • EN IEC 63000:2018 New harmonized standard to demonstrate RoHS compliance • EN 55032:2015+A11:2020 Electromagnetic compatibility of multimedia equipment - Emission requirements • EN 55035:2017 - Electromagnetic compatibility of multimedia equipment - Immunity requirements 	
And it is therefore compliant with current directives and regulations.	
This declaration of conformity is issued under the sole responsibility of the manufacturer.	
Date: 15/6/2023	Signature: 
Place: ANZOLA DELL'EMILIA (BO) - ITALY	

CE Declaration of Conformity

The undersigned Giuseppe Vaccari	
As legal representative of the company Axel Technology Srl	
based in: Via Caduti di Sabbiuno, 6/F – 40011 – Anzola Emilia (BO)	
VAT number: IT01735031203	
<i>declares</i>	
that the product: Digital RDS/RBDS encoder. n°8 Datasets. UECP v.7.05. ODA, TMC, IH, RT, RT+. PS, RT, PTY Scheduler. Ethernet, Web Server for complete programming of the encoder, SNMP v2.0. 6 GPIs, 4 Relays. Interface for automatic directions and GPS. Hi-Res TFT display.	
Model and/or code: RDS E5	
Date of manufacture: see label on the product	Serial number: see label on the product
It was built in compliance with the following directives and standards:	
<ul style="list-style-type: none"> • Directive 2014/35/EU known as the "Low Voltage Directive" • Directive 2014/30/EU known as the "Electromagnetic Compatibility Directive" • Directive 2011/65/EC known as "RoHS" • Commission Delegated Directive (EU) 2015/863 of 31 March 2015 amending Annex II of Directive 2011/65/EU • Directive 2012/19/EU known as "WEEE" • Directive 2001/95/EC known as "General product safety" • UNI EN ISO 7010:2021 Title: Graphic signs - Colors and safety signs - Registered safety signs • EN 62368-1:2018 - relating to electrical safety for computer equipment and audio/video products • IEC 62311:2019 - Evaluation of electronic and electrical equipment with regard to restrictions on human exposure to electromagnetic fields (0 Hz – 300 GHz) • EN 55032:2015+A1:2020 - Electromagnetic compatibility of multimedia equipment. Issue requirements • EN 55103-2:2010 Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Part 2: Immunity. • EN 60065:2019 Audio, video and similar electronic equipment Safety requirements. • EN 61000-6-1:2016 – EMC – Immunity for residential, commercial and light industry environments. • EN 61000-6-3:2020 – EMC – Emission for residential, commercial and light industry environments. • EN 60950-1:2014 – Safety of ITE (Information Technology Equipment) • EN 55024:2017 Information technology equipment - Immunity characteristics Limits and methods of measurement. • EN IEC 63000:2018 New harmonized standard to demonstrate RoHS compliance • EN 55032:2015+A11:2020 Electromagnetic compatibility of multimedia equipment - Emission requirements • EN 55035:2017 - Electromagnetic compatibility of multimedia equipment - Immunity requirements 	
And it is therefore compliant with current directives and regulations.	
This declaration of conformity is issued under the sole responsibility of the manufacturer.	
Date: 15/6/2023	Signature: 
Place: ANZOLA DELL'EMILIA (BO) - ITALY	