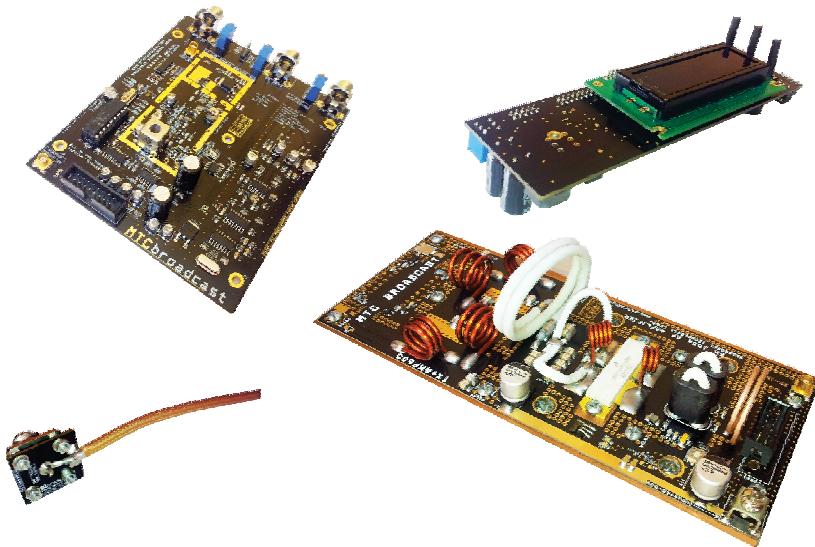


# KIT 600w FM

## PLL MONO/STEREO + AMP600

- ° Typical 500w around the band
- ° LDMOS Technology
- ° Automatic Power Control
- ° Grafica full screen parameters
- ° Monitoring and Alarms
- ° Filter Armonico - 60dB suppression
- ° Excellent RF Performance
- ° Coder Stereo 45dB
- ° Monitor External RF
- ° 48V. 16 amp



The Stereo FM Transmitter BROADCAST, ultra compact kit designed with the latest techniques RF achieving stable and high efficiency levels. This product is based on RF integrated systems, the purpose of mounting and assembled quickly, complying with the laws emanating standares Communications at mundial.

PLL MONO /STEREO + AMP600, including Unit Viewer will, PLL Mono/ Stereo Control Amplifier AMP600 and PCB Connector "N" output. Engineers, technicians, equipment manufacturers FM transmitters. Tremendously reduce their production costs RF and time. forget cumbersome job of uniting step by step. A PTFE Teflon PCB and Final LDMOS device Frescale MRFE6VP5600H reliable, allows to achieve up to 600w stable and clean power.

### Specifications

- |  |   |
|--|---|
| ° Nominal Power 5w - 600w                            | ° Frequency operation 87.5 - 108 Mhz    |
| ° Harmonic -60dbm                                    | ° Spurious best -70 dbm                 |
| ° Material Teflon PTFE AMP600 y Fr4 Expander and PLL | ° Frescale LDMOS MRFE6VP5600H           |
| ° Voltage operation 48dc                             | ° Maximum operating current draw 16 Amp |
| Stereo audio input Conector RCA Female               | ° Regulation trim left right mult       |
| ° Channel separation 45db                            | ° Entrada MPX Multi adjustable trim     |
| ° MPX response +/- .4db 10hz a 100 khz               | ° Audio left right -10db a +10db adj    |
| ° Stability audio frequency +/- 200hz                | ° Distortion 0.3%                       |
| ° Alarm with higher ROE 200w                         | ° Alarm Temperature in °70 grados       |
| ° Alarm against excess voltage 50.1 volts            | ° RF output connector " N"              |

**Composite units****PLL MONO / STEREO + AMP600 is divided into 4 parts**

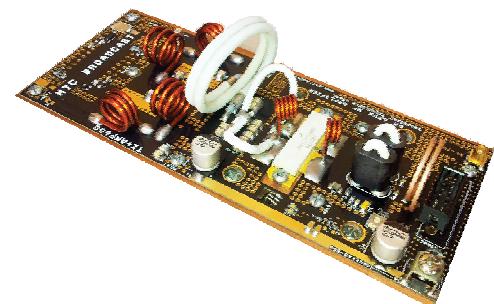
Showing controls through the LCD Graphic Display, Frequency 88-108, RF Power Direct,Reflected,Deviation Modulation amplifier Voltage, Temperature AMP600 Reflected alarm system ROE, etc. Excess voltage PA

**Viewer will Expander Unit****1****Card PLL Mono/Stereo****2**

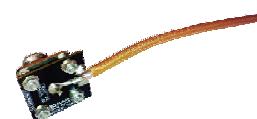
The PLL Mono Stereo on a PCB ENIG plated immersion gold, high quality, high performance oscillator and PLL adding a stereo Coder 45db. A MPX input ideal for a sound processor, also has output by MCX connector, to place a monitor external modulation.

**Amplifier AMP600****3**

Made on a printed Gold, PTFE teflon low insertion loss, harmonic filter RF coupler frescale LDMOS power steering system, income 48DC volts. Excellent stability of power from 5w Digitally regulated to 600w. A Sampled RF monitor, connect the unit to measuring instruments.

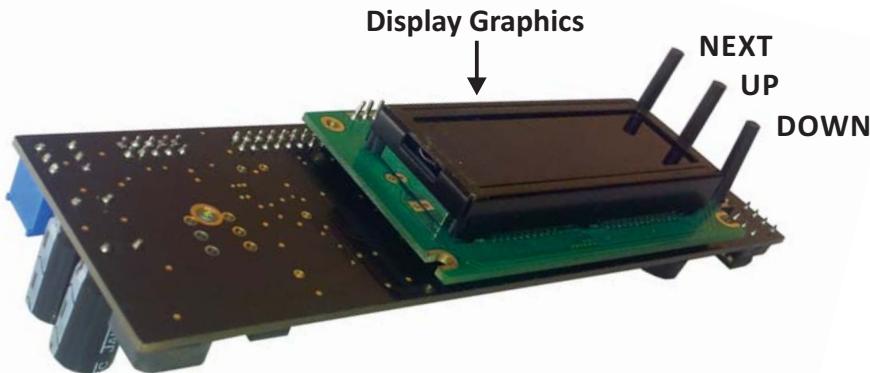
**PCB Connector and Cable****4**

To complete the final connection and to deliver a RF output efficiently clean the PCB connector and cable RG400 is welded to the output of the amplifier AMP600 and connected to his cabinet with Conn "N" happy day .....

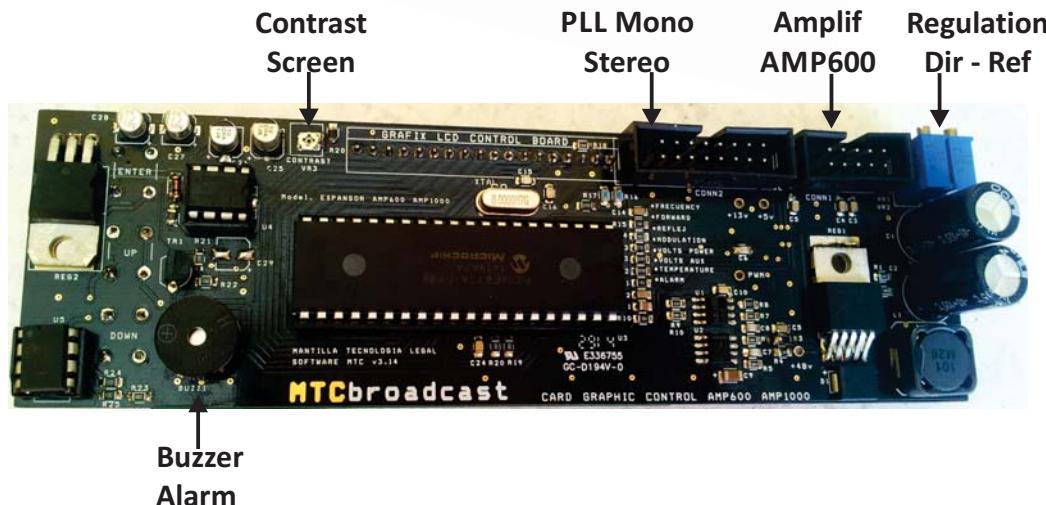


## Visual Expander Unit

The Viewer will Expander Card Unit and system control PLL MONO / STEREO + AMP600 to it connects the 2 units; the PLL and oscillator amplifier AMP600 and can rule the control both showing on the LCD screen Grafica levels and parameters thereof. so we have in the menu displayed by the transmitter KIT 600w:



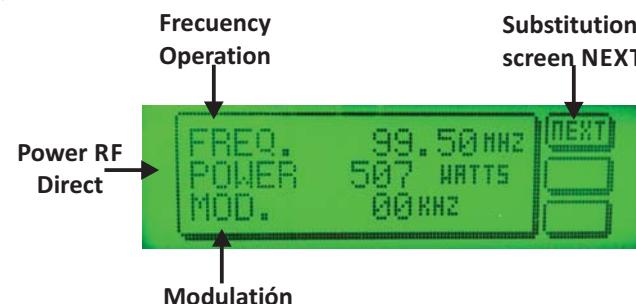
The adjusting the levels of RF forward and reflected power comes from the factory already regulated, if necessary can adjust comparing it with a Power Meter Power Sensor ú wattmeter.



Connections to PLL oscillator and amplifier AMP600 are made via flat cable 16 and Threads 14, with an approximate length of approximately 25cm. Installed inside the cabinet is not a problem now only need to place the expander unit Viewer will in the front of the cabinet and flat cable connections to the PLL Mono / Stereo and amplifier AMP600, to command the transmitter KIT.

### Display Interface

When switching the PLL Mono / Stereo + AMP600, the appearance of make and model, then displays the main menu 3 indicators. Operating Frequency, Power Direct Diversion Modulation This menu is always in the foreground, you can advance to other screens by pressing the button at the point where it is written NEXT



## Configuration Menu

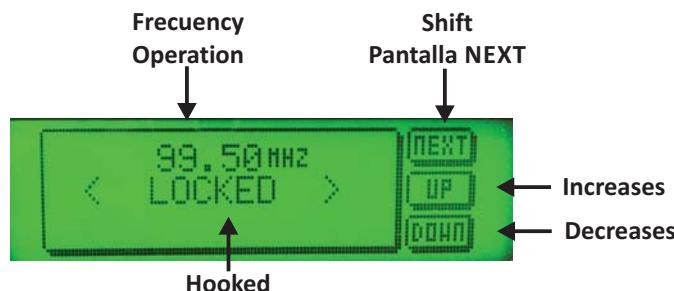
3 buttons to choose forward (NEXT) top (UP) Download DOWN, all settings menu options are as follows:

- ° Frequency Set
- ° Power in Set
- ° deviation Audio
- ° voltages
- ° Temperature
- ° Alarms

### Shift Frecuency

If you change the dial, press the NEXT button on the Main Menu, then to change just enough up (UP), lower (DOWN) achieving decrease or increase the frequency in steps of 100 khz  
If you require that steps be 50kHz frequency can also be adjusted from factory (Via Software), get in touch with us.

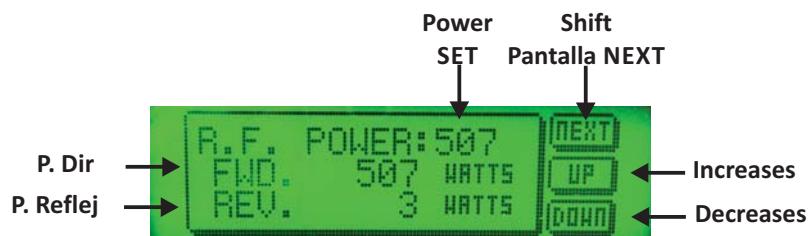
While running this button UP, DOWN making search the PLL Mono / Stereo + AMP600 will not start or stop the power takeoff



### Potencia Power SET

Pressing UP DOWN, up and down, the RF power can be adjusted from 5w to 600w in 1watt steps at the point set by the power eg 350w and have to shutdown when you switch remain engraved with the last power setting that I change and be well until you want to raise or lower the power, repeating the same algorithm

- ° Power SET output power (only set to this level)
- ° Forward and Reflected Power detected



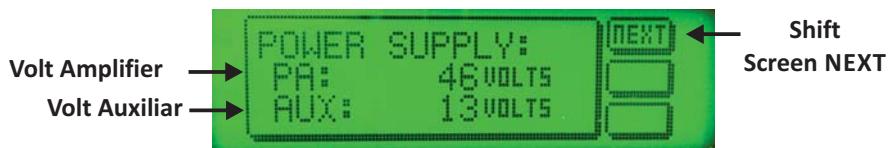
## Desviación Modulación

Since the audio input Left, Right Stereo MPX signal u, we can monitor the percentage of Modulation entering the transmitter and to take precautions to avoid over modular following parameters



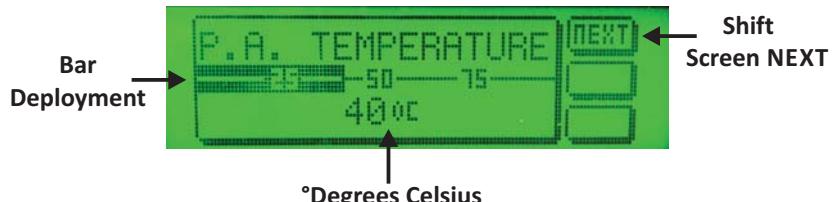
## Voltages

The ideal source of power 48 volt, 20 amp (Ud. Has less voltage equipment can not be guarantee covering up to 600w at certain frequencies) also voltage levels from the power source to control are digitally measured if excess voltage (50 volts exceeding the alarm is triggered and can block algorithm. Thus also an auxiliary voltage required by the system (optimum voltage level of 13 volts) is observed



## Temperature

As you go up the power, the temperature logically begin to rise, so the amplifier AMP600 has a sensor that measures ° degrees centigrade by centigrade making it displayed on the Menu, as is behaving our module. ( you need to register Pallet amplifier AMP600 necessarily on a radiator heatsink + fan flow while the computer is turned on ) The optimum operating temperature must be around 50 ° to 60 °, several factors dependent on the level of heating may be less or more from the size of the heatsink, fan fans as the tuning of the antenna, cable type etc. The alarm is triggered around 70 ° degrees, to prevent overheating place the TX in a cool place and check the conditions described above.



## Alarm

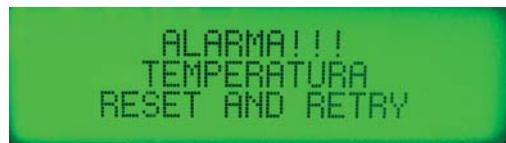
Warning Alarm ROE ....!

Check if you have properly connected the cable to the TX, then proceed to verify calibration of your antenna. Also the antenna cord is damaged likely.



## High Temperature ....!

Alert when this by exceeding the 65 ° degrees, check if the fan transmitter has been blocked or is damaged. Also note the ambient temperature is not too high. If the temperature is always working above 65 ° degrees, the limit is likely that your sink heat is very small. replace ....!



## High voltage ....!

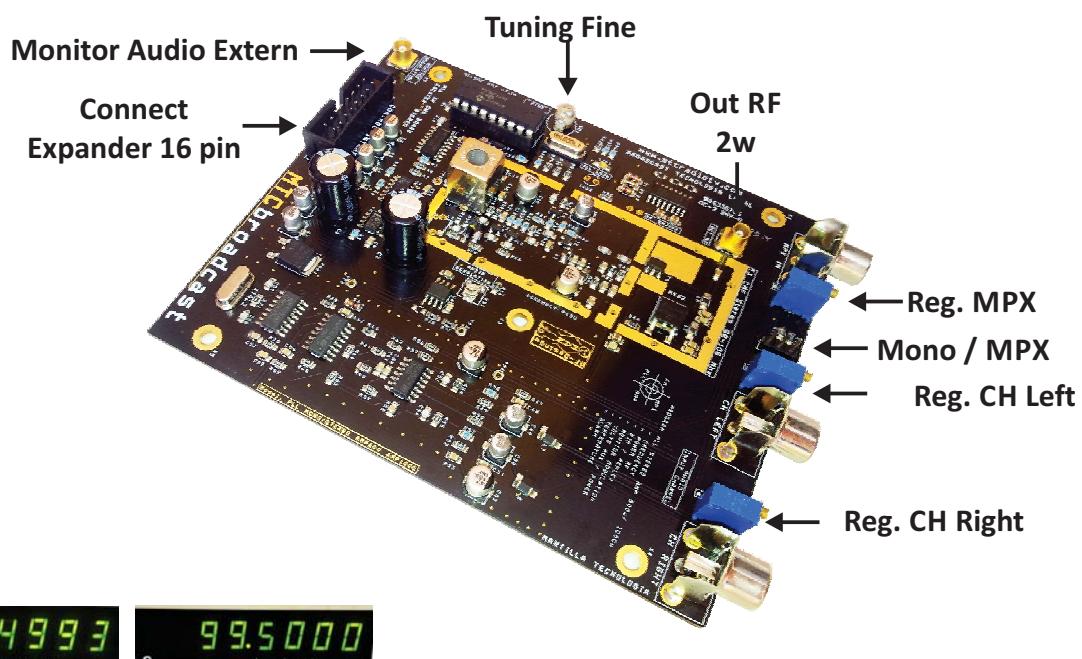
If you exceed the maximum level of work (above 50.1 volts) activated blocking all, the PLL Mono / Stereo + AMP600 system



## Card PLL Mono/Stereo

2

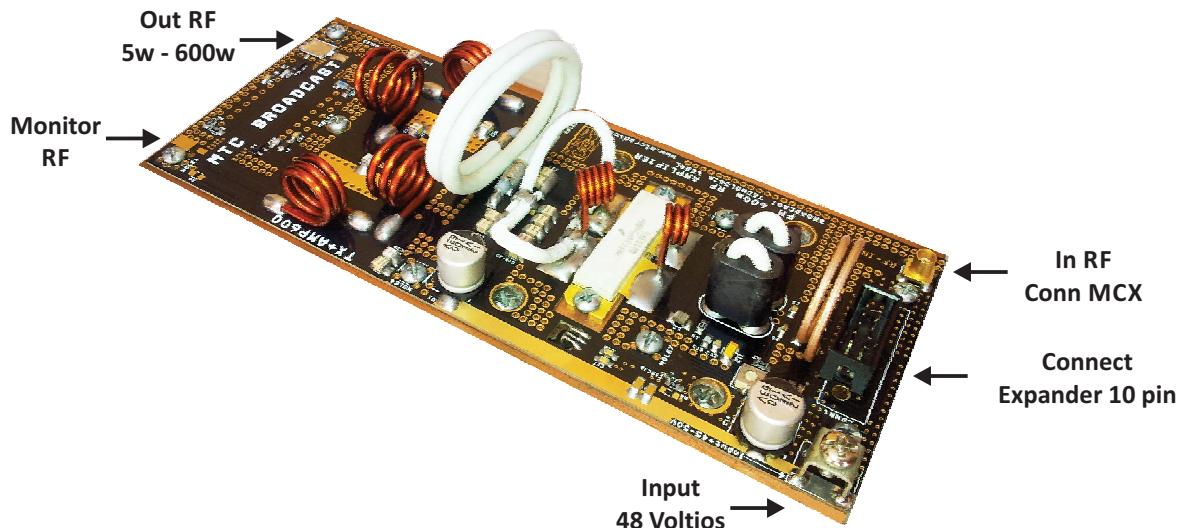
Our PLL Mono / Stereo 2 watt adjustable via software, commanded by card Stereo expander and generator 45db which is fed by the RCA connector and can Regular signals I + R (Left and Right channel) from your console, compressor limiter etc. If you have an external audio processor, you can move the jumper Jumper Mono / MPX off - on, enter the appropriate signal to RCA conn, and adjust to taste the MPX level from your processor.



If you set the fine frequency needs frequencymeter, be consider disconnecting the audio to proceed to calibrate

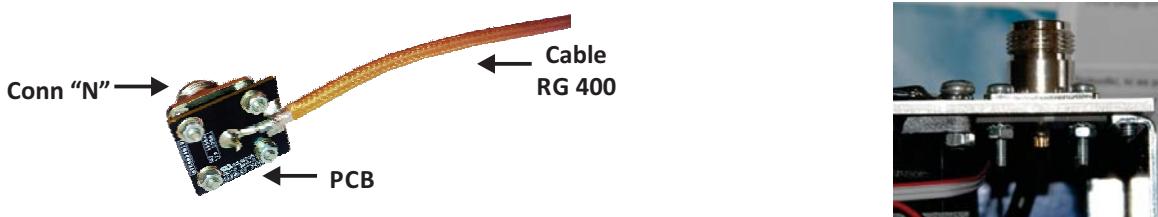
## Amplifier AMP600

Amplifier 600w uses a frescale MRFE6VP5600H LDMOS has a high VSWR 65: 1 a gain above 26 dB and 80% efficiency. Higher than comparable LDMOS in current market. It includes a low pass filter, broadband without setting a directional coupler survey the forward and reflected power, automatic power control, and maintains the power set linear in extreme conditions. All mounted on a PCB PTFE teflon very low losses.



## PCB Connector y Cable

To minimize losses, we printed PCB connector. Attached to the cabinet directly we obtain an electrically clean and safe contact, Free parasitic inductances, ensuring greater power transfer. The PCB Pad comes to weld the connector and cable coming from the amplifier AMP600



Broadcast Tecnologia legal Co sac

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**At the forefront of the Broadcasting**

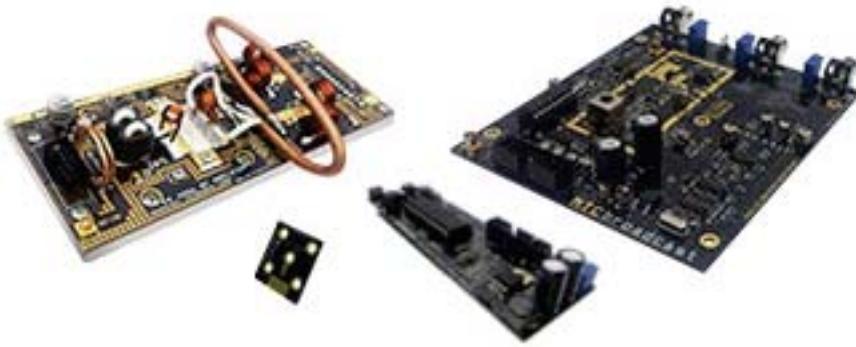
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La Potencia de un Transmisor FM sin calidad de sonido no sirve de nada ....!

## KIT Transmisor 600w Broadcast

### PLL MONO/STEREO + AMP60



**SET 600w FM Stereo incluido filtro armonico , control digital  
Potencia , protección ROE , TEMP. Banda ancha.....!**

El nuevo Kit PLL MONO/STEREO + AMP600 Transmisores FM broadcast , con características superiores a toda la competencia, No se preocupe por la conexión el PLL MONO/STEREO + AMP600 dispone de todas las partes y listo para colocarlo dentro de su gabinete, tan solo única fuente alimentación requiere 48DC 1000w, viene en un terminal para enroscar fácilmente Ahora No necesita seguir gastando mas y mas ... agrupando pallets módulos y filtro de armónico por separado, tampoco comprando mas de 1 fuente poder y auxiliares de 15 y 24 volts para su PLL CAF consecuencias engorrosas propias de los Módulos pallets amplificadores que se venden por separado de kits convencionales, Dispone 1 salida Control sistema de monitorización alojada en PCB (muestra RF), para conexión analizador espectro y frecuencímetro. Lo puede llevar al panel frontal delantero de su Gabinete.

TRANSMISOR	CONTROL Módulo
Impedancia 50 Ohm	
Potencia Típica 500w	Microcontrolador Software MTC
Conector "N" tipo 50 Ohm	Control sistema 3 Pulsadores LCD Grafico
Rendimiento Armónico - 60 db	Pasos Potencia digitales de 5w a 600w
Rendimiento de espureas - 85 db	Alarma contra exceso temperatura 70 g.
Los pasos frecuencia 100 khz	Frecuencia Programable 88 - 108 Mhz
Estabilidad Frecuencia +/- 300hz	Protección contra exceso Voltaje 50v
Regulación potencia 5w -600w.	Monitor Módulación Tiempo Real
El poder fuera de enganche - 70	Protección contra ROE
Separación Stereo 45Db	Muestra RF -50db
45 - 48 volts dc 16.5 amperios máximo	Semiconductor Frescale MRFE6VP5600H
Ventilación Forzada SI	PCB AMP teflon, bajas perdidas Roger
Peso Módulo sin disipador 1.2 Kg	Conn cables RF Módulo salida "N" RG400
dimensiones PLL 105mm x 125mm	PA eficiencia 80%
" AMP600 170mm x 70mm	
" Expansor 155mm x 45mm	
" Dimensiones	

\*500w Típico en todo la banda

\*Tecnología LDMOS

\*Control Automatico Potencia

\*Pantalla Grafica full parametros

\*Monitoreo y alarmas

\*Filtro Armonico -60db supresión

\*Excelente Performance RF

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**A la vanguardia de la Radiodifusión**

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# KIT Transmisor 600w Broadcast

## PARTES PLL MONO/STEREO + AMP60



La Potencia de un Transmisor FM sin calidad de sonido no sirve de nada ....!

### Etapa Osciladora PLL MONO/STEREO

El Corazón del Transmisor PLL MONO/STEREO construido sobre un PCB de alta calidad y full componentes ROHS. aseguran una alta longevidad del producto. Su estructura se basa en un sofisticado control Software programando al VFO PLL con salida limpia y Ultra Estable junto con un filtro ACTIVO, de doble velocidad, dandole al circuito una pureza espectral en toda la banda



### Unidad Amplificadora

Cubre toda la banda de FM de 87.5 a 108 MHz sin ajuste de 450 - 600W de potencia RF, usando un moderno FREESCALE LDMOS MRFE6VP5600H, ofrece una limpia y regulable potencia desde 5 watts hasta 600w máximo. sin afinación en toda la banda frecuencia.



### Unidad Visualizadora



Tarjeta Expansora alojado un Display permitiendo la Lectura y Control preciso de Frecuencia Potencia FWD, REFLEJ, temperatura, Voltajes DC, Monitor Modulación son visualizadas en una pantalla Grafica de alta calidad , permitiendo una amigable comunicación y visualización del Transmisor en pleno funcionamiento. Cualquier causa fatal de antena, temperatura ó sobre voltaje por alta tensión inmediatamente se enciende la alarma de protección, mediante un zumbador dc interrumpiendo el ciclo de trabajo del equipo, hasta solucionar el problema

### PCB Chasis Gabinete

Este pequeño Impreso PCB, se conecta fuerte y directamente al Conector "N", (ver fotos) le permite una inductancia muy baja y limpia, un contacto de aspecto profesional. Perfecto para nuestra salida RF. El cable conexión incluido puede ser fácilmente soldado a los terminales como se muestra en las fotos. Este cable también se prepara para soldar en su extremo libre, haciendo la instalación extremadamente simple, Cumpliendo los requisitos y standares, que todo Transmisor debe actuar.

