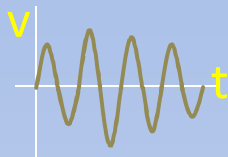
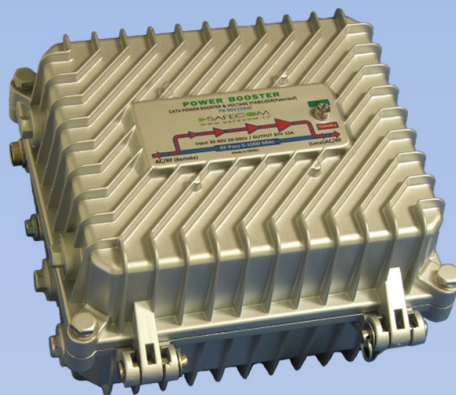


Safecom -Power Booster

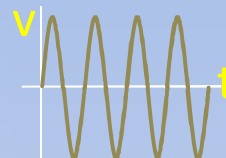
87V -15A AC/AC Stabilizer -Zero Crossing technology & RF-PASS 1-GHz



Vin 30-87V Vac (US)
Vin 30-64V Vac (EU)



✓ **Patented**

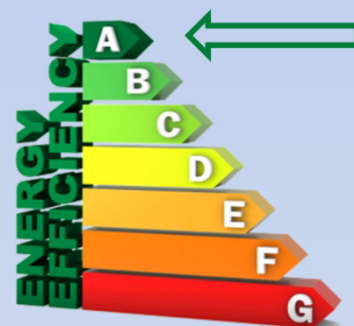


Vout 87 Vac (US)
Vout 60 Vac (EU)

- ✓ **Minimize the number of power supplies in the network.**
- ✓ **Increasing the powering area covered by power supply.**
- ✓ **Improved network efficiency.**
- ✓ **Support 15A (Unlimited time).**

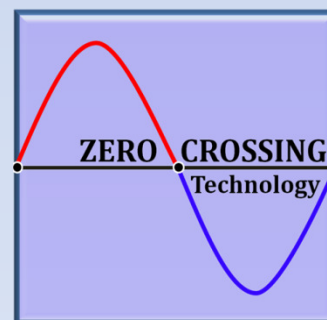
The Concept and Challenge.

Safecom's Power booster was designed to increase voltage at remote amplifier & node cascade, maintaining active to optimal voltage levels. Unit controller monitors the input voltage level online, and operates Power Booster Zero Crossing gears in order to ensure optimal voltage output , 87V (US) or 60 V(EU).



Standard Features

- Europe 60V & US 90V Standard.
- Support full 15A rms input /output .
- Smooth transfer between gears –Zero Crossing Technology.
- life time operation.
- Top-efficiency -Genius Toroidal Transformer.
- Electronic Overload Protection.
- Water-proof Enclosure.
- Wall or pole Mounted.
- Automatic Standby mode.
- Opposite connection protected.
- Input & Out Surge Protection.
- Protecting downstream network failure.



Patented Power Booster solves the power distribution problem in a CATV network caused by high-resistance and low energy-efficient coax or electric cables.

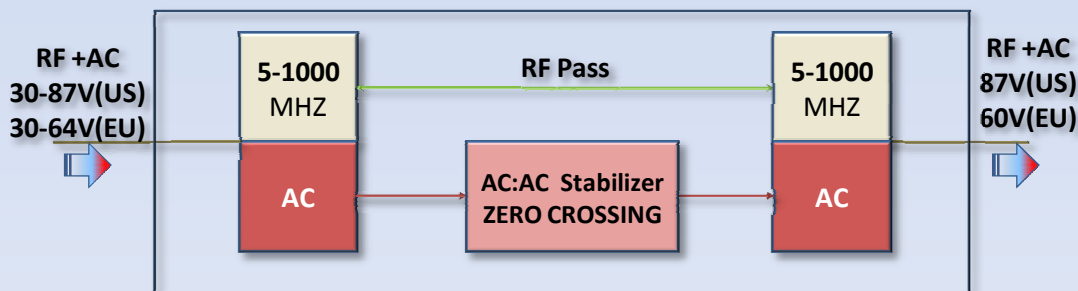
Passive, standalone element, **life time operation & ONLINE (Zero Crossing patented technology)**. 15A 30-87Vac (US) / 15A 30-64Vac (EU).

The unit ensures the optimal voltage levels required in remote locations by optical nodes, trunk amplifiers, and line extenders overcoming voltage drop along the power or coaxial cable. Increasing the distance between remote power sources leads to reduction in the number of power insertion points across the network, less power supply (especially under-loaded power supplies are unnecessary), less street cabinets and permits are needed and less flat fees to the utility company for each of the power supply (even if it was never used).

Safecom's cost-saving patented Power Booster compensate the voltage drop over coax cable and enables to utilize the DPS remote backup technology between distances locations. The Power Booster can be seamlessly connected via cable to the DPS4 enabling robust power redundancy system and overcome the range limitation of the previous DPS generations. In addition to HFC networks, the power booster now enables back up to Deep Fiber networks with central powering using existing coax infrastructure between powering centers.

Electronic	
Input Frequency (Hz)	50/60 Hz
Max Output Current (A)	15A
Max Input Current	15A
Self current Load	190mA
US	Input operating Voltage range (Vac)
	30÷ 90 Vac (US)
	Voltage gain ratio (input 78-90 Vac)
	1 : 1.03
	Optimal Voltage range
	51-90Vac
EU	Voltage gain ratio (68-78)
	1 : 1.15
	Voltage gain ratio (58-68Vac)
	1 : 1.33
	Voltage gain ratio (input below 58Vac)
	1 : 1.52
EU	Input operating Voltage range (Vac)
	30÷ 65 Vac (EU)
	Voltage gain ratio (input 56-64 Vac)
	1 : 1.03
	Optimal Voltage range
	37-65 Vac
EU	Voltage gain ratio (49-56 Vac)
	1 : 1.18
	Voltage gain ratio (42-49 Vac)
	1 : 1.36
	Voltage gain ratio (30-42 Vac)
	1 : 1.56
Load Regulation (%)	
<2%	
Efficiency (%)	
>96%	
Transfer time (0 sec)	
ONLINE	
Standard Features	
Direct Connection In / Out 5/8 inch	
√	
Electronic Overload protection	
√	
Power Booster indication Green /Red LED	
√	
Auto Standby mode	
√	

Mechanical	
Dimensions (L , W , H) mm	250 X 200 X 152
Weight (Kg/lbs)	6/13.2
Connector 5/8 inch	√
Environment	
Operating Temperature	-40°C ÷ +65°C
Storage Temperature	-40°C ÷ +70°C
Humidity (waterproof) IPX8	0 ÷ 100%
Corrosion	ASTM B 336Hr
Finishes	Chromate Conversion
RF	
Bandwidth	5-1000MHz
Impedance	75 Ohm
Through loss 5-250 MHz	< 0.5 dB
Through loss 250-500 MHz	< 0.7 dB
Through loss 500-700 MHz	< 0.9 dB
Through loss 700-800 MHz	< 1.0 dB
Through loss 800-900 MHz	< 1.2 dB
Through loss 900-1000 MHz	< 1.5 dB
Return Loss	> 20 dB
RFI	130 dB
Hum Modulation	> 65dB



42- 87V -15A AC/AC Stabilizer -Zero Crossing Technology & RF-PASS 1-GHz NO RELAY - NO SWITCHING - LIFETIME OPERATION -NO OPERATIONAL LIMITATION

Safecom's patented POWER BOOSTER is the most cost-effective, efficient, reliable and functional in the market! Our Power Booster was built on four synergistic parts, ensuring always optimal performance.

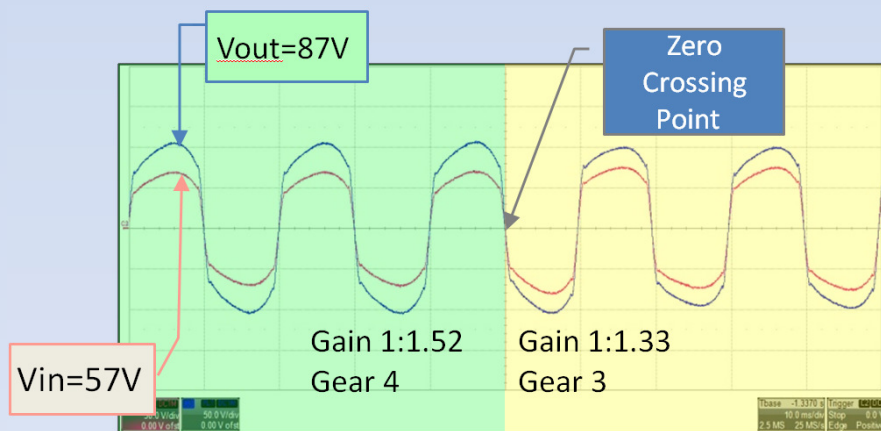
Passive, standalone element, Power Booster solves the power distribution problem in a CATV network caused by high-resistance and low energy-efficient coax & electricity cables.

- **Heavy-duty, up to 15A** continuous support (87V & 60V-Networks). Can be easily installed anywhere in the network, with no high current or low voltage limitation.
- **ZERO CROSSING SOLID STATE GEAR:** enabling smooth operation without using any **mechanical relay**.
- **NOVEL Toroidal TRASFORMER:** Compact sized, high-efficiency, high-energy Toroidal transformer.
- **SMART CONTROLLER:** manages gear operation, provides overload protection and enables standby mode.
- **RF PCB:** Dual opposite power inserter (made in Japan) to insure optimal RF signal quality.

❑ ZERO CROSSING technology instead of mechanical relay.

The Power Booster is typically installed at a great distance from the Power supply, where voltage could change frequently due to unstable environmental conditions. This could translate into thousands, or possibly millions of transactions per month, which make mechanical relays highly inefficient. Network start up is another issue that should be addressed. During the period of the start up the voltage at the input could drop while the Booster output starts loading. This generates unsafe jitter of mechanical relays.

Safecom's patented Zero Crossing technology eliminates these problems by enabling smooth operation of the Power Booster in all situations and under all environmental conditions.



Zero Crossing means:

- ✓ "0" taster time.
- ✓ "0" inrush current.
- ✓ Life time operation.

Test using Ferro P.S 87V(US)

❑ **Ultra High Power TOROIDAL TRASFORMER** instead of regular low power iron transformer.

Power boosters require very low self-current load, need to be compact in size, light-weight, and highly efficient energy transformers. Israel-based Hulda Transformers, experienced in building avionic and medical & transformers, is an expert in manufacturing Power Boosters that meet all of these requirements. Due to the high performance of Hulda’s TOROIDAL transformers, Safecom’s Power Booster supports up to 1350VA, while maintaining extremely small size and top efficiency.

❑ **Two-Step overload protection instead of typical overload protection.**

Safecom’s Power Booster has a unique current overload protection with two modes for startup and for continues operation. This ensures safe start-up of the network even at full load, and 100% overload during regular performance.

The Automatic Standby Mode prevents current inrush by enabling a two-staged network startup, thus eliminating the inrush current effect, and enabling smooth operation. The standby mode operates at first startup, or in the event of overload.

❑ **RF PCB – Dual opposite power inserter.**

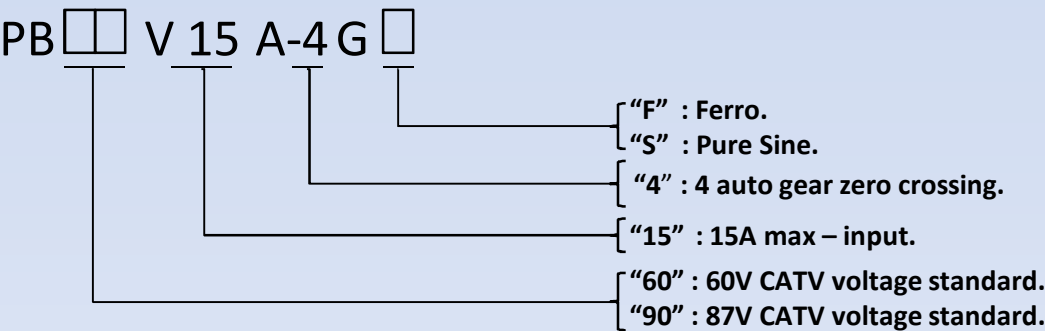
Safecom’s RF design is based on unique technology, particularly around RF PCB, which supports high-currents, such as 15-17A. Safecom’s Power Booster includes Japanese-made internal RF PCB, designed for continuous support up to 87V - 17A without affecting the RF signal

Reliability is our TOP concern.

Safecom’s original Power Booster has already been installed and tested in the most unstable CATV networks in South America, the Far East, Eastern and Central Europe, and in the United States – all installations are 100% successful!

After four years of development and production of Safecom’s Power Boosters, we can say with confidence that they are the most advanced boosters on the market, and can guarantee their low-cost leadership. Our devices can significantly reduce Cable Operators’ powering expenses, while increasing the reliability of their networks.

Safecom Power Booster ordering information



RF-PASS 5-1000MHz

Higher Performance & Reliability – ORIGINAL SAFECOM- POWER BOOSTER

Benchmark of SAFECOM Power Booster vs. Competitive



Technology		SAFECOM ORIGINAL PATENTED POWER BOOSTER 15A	APB (8A only) ? (China) ?
Transfer gears		✓ Zero Crossing ✓ Solid state relay	Low Cost Mechanical Relay
Online transmission		✓ Yes	NO
Transformer		✓ Novel Toroidal Technology ✓ compact size and highest efficiency, Double energy.	Simple Low Cost iron transformer
Self Load		✓ 80mA – EU // 180mA-US	?
Switching time between gear		✓ 0 (Zero)	>20mSec
Current during switching		✓ 0	Indefinite
Life expectancy		✓ Unlimited	? Limited by mechanical relay operational Depend on voltage stability
Electronic			
US	Operating Range	✓ 30÷90 Vac	65-90
	Optimal Voltage range (Vac)	✓ 42÷90 Vac	65-90
	Gain ratio (78-90 V)	✓ 1:1.03	---
	Gain ratio (68-78V)	✓ 1:1.15	---
	Gain ratio (59-68V)	✓ 1:1.33	---
	Gain ratio (<59Vac)	✓ 1:1.52	---
EU	Operating Range	✓ 30÷65 Vac	Not available
	Optimal Voltage Range	✓ 36÷65 Vac	
	Gain ratio (56-64 V)	✓ 1:1.03	
	Gain ratio (49-56V)	✓ 1:1.18	
	Gain ratio (42-49V)	✓ 1:1.36	
	Gain ratio (<42Vac)	✓ 1:1.56	
Load Regulation (%)		✓ <2%	-
Input Frequency (Hz)		✓ 50/60 Hz	60Hz
Max Output Current (A)		✓ 15A	8A
Max Input Current		✓ 15A	10A
Max Power		✓ 1350VA	650VA
Over load protection		✓ 2 stage Smart 15A protection Start up 20m: 300% Normal : 100%-15A	115% - regular (8A-only)
Mechanical			
Dimensions (L,W,H)		✓ 9.1 X 7.9 X 5.9 Inch	14 x 9.13 x 6.75 inch
		✓ 23 x 20 x 15 cm	36 X 23 X 17 cm
Weight (Lb, Kg)		✓ 13.4 Lbs / 6.2 Kg	21.4 Lbs/ 9.7Kg
Indication			
		✓ Outdoor -LED / RED –STANDBY Green- Booster “ON”	None