

The 230 Series . . .

Something new in a high power, high frequency linear amplifier.

The 230 series represents a new generation in linear amplifiers. Utilizing complete microprocessor control, the 230 provides totally automatic operation . . . full output is always available at any frequency without touching a control and without "broadband" compromises.

FEATURES INCLUDE THE FOLLOWING:

- Fully automatic. All tuning and protection under microprocessor control.
- Remote control operation. The RF/power supply deck may be near power mains and antennas with only the small "microcontroller" at the operating position.
- Full legal limit on all bands with NO TIME LIMIT in ANY MODE.
- Full QSK.
- Built-in VSWR computer with readout on custom LCD display.
- Automatic safety monitoring for reflected power, grid and plate current, filament voltage, and efficiency.
- Outputs for external RS-232C control and automatic antenna switching.
- Modular construction for ease of maintenance.
- Export version (230AX) includes 10-meter coverage and accommodates a wider range of AC line voltages.
- Commercial version (230C) available for full coverage 1.8 through 30 Mhz at 2250 watts PEP, continuous.

All Bands. The 230AX covers all amateur bands from 1.8 to 30MHz

1500 Watts. Continuous power output is 1500 watts in all modes, which is the full legal input for all amateur bands where high power is authorized.

Completely Automatic. The 230AX amplifier is fully automatic. The microprocessor control system continuously adjusts the amplifier for maximum efficiency by using a sophisticated tuning algorithm in conjunction with gear-head driving motors for the bandswitch, plate and loading capacitors.

Pre-Trip Feature. All critical parameters are monitored by the microprocessor control system. A unique pre-trip feature is included to warn you of the impending trip.

The Controller Unit. The 230AX includes a controller unit that contains bar indicators for displaying operating parameters and controls for the system and a large RF/power supply deck which can be located up to 250 feet away from the RF unit. To ensure RF immunity for the control system, as well as to minimize emissions from the controller unit, A R D has included a serial bus configuration between the controller and RF/power supply deck.

Furnished Accessories. The 230AX comes with a controller unit, RF/power supply deck, 15-foot controller cable, 15-foot coax cable, 6-foot RCA/RCA cable and a 6-foot phone RCA cable.



**COM-
WEST
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Automatic Linear Amplifier

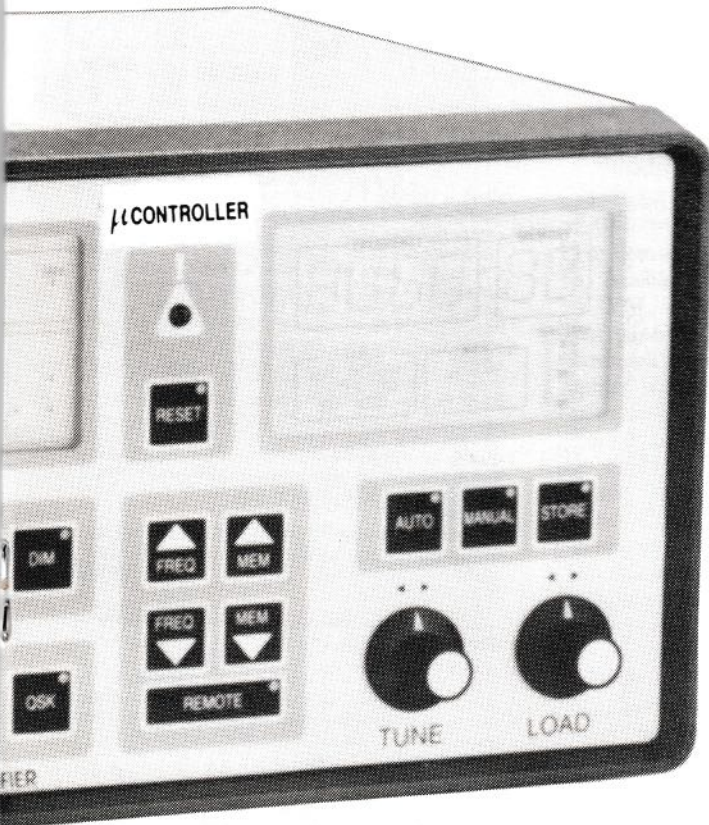
DESCRIPTION

The 230 series provides a marriage of solid RF design around the popular EIMAC 3CX800A7 and sophisticated microprocessor controller design utilizing a highly noise-immune, proprietary serial bus system that we have been using successfully in thousands of industrial control systems worldwide. The microprocessor control system allows all display and controls (microcontroller) to be remotely located from the RF/power supply deck. This provides the option of locating the RF/power supply deck up to 250 feet away from the operating position and close to power sources and/or antennas. The two are interconnected with a furnished 25-conductor, shielded cable assembly.

The amplifier utilizes EIMAC 3CX800A7's in order to keep high voltage down and still retain a highly efficient design. Output is a Pi-L, chosen for its broadband characteristics and excellent rejection of spurious emissions. Silver plated tank coils and other components are heavy duty for trouble free, high power continuous operation. Powerful gearhead motors controlled by the microprocessor drive the bandswitch, tune and load capacitors.

The power supply is designed to support continuous amplifier output in all modes (CONTINUOUS, not "Amateur" continuous or ICAS.) The hypersil plate transformer and full-wave rectification contribute to excellent regulation, and separate transformers provide filament voltage and control power.

The control system is a Z80-based design utilizing PROM program storage for ease of updates and EEPROM to retain operator-selected information without the use of batteries. The microprocessor control electronics are housed within a completely shielded enclosure, which is in turn housed inside the metal cabinet of the microcontroller for high RF immunity. The microprocessor-based system allows for extensive protection of the 3CX800A7's. All parameters vital to the long life of the tubes are monitored and compared with pre-trip values and trip values. Appropriate protective action is taken when necessary to protect the tubes. However, consideration has been paid to keeping the amplifier on the air if possible! For example, reflected power, not VSWR, is monitored as a trip parameter. In this manner, you stay on the air at a high VSWR condition if the output power is low enough.



We invite you to call or write us for additional information.

ADVANCED RADIO DEVICES ■■■■

SPECIFICATIONS

Power Output:	1500 Watts	Metering:	
Duty Cycle:	Continuous	Power Output:	0-3000 Watts
Frequency:	1.75 - 2.0 MHz 3.1 - 4.3 MHz 5.8 - 8.0 MHz 13.4 - 15.1 MHz 18.5 - 21.6 MHz 24.8 - 25.0 MHz 28.0 - 30.0 MHz	Grid Current:	0-100mA
Drive:	60-80 Watts	Plate Current:	0-2500mA
Input SWR:	1.5:1 (Slightly higher on WARC)	Plate Voltage:	0-2500V DC
Harmonic Suppression:	-45dB	VSWR:	1:1-5:1
Intermod Products:	-45dB	Reverse Power:	0-500 Watts
ALC:	0 to -10V DC	Safety Trips:	
AC Power:	230V AC, 60Hz	Plate Current:	1.3A
Plate Voltage:	2250 Volts, Nom.	Grid Current:	120mA
Input/Output Impedance:	50 ohms, unbalanced	Filament Volts:	12.8V DC
Output Configuration:	Pi-L	Reverse Power:	500 Watts
Motors:	Gearhead DC	Misused:	1600 Watts diss.
Interlocks:	3 Cabinet and 1 HV Shorting	Controller Connectors:	
		Key In	1/4" phone jack
		Key Out	RCA
		ALC	RCA
		PTT	RCA
		RS-232	Female D (25 pin)
		RF Deck	Male D (25 pin)
		RF/Power Supply Connectors:	
		RF In	BNC
		RF Out	SO-239
		AC Power:	8-foot cord with: stripped ends
		230AX:	
		Dimensions:	
		Controller:	10"W x 8"H x 9"D
		RF/Power	
		Supply Deck:	14"W x 24"H x 13"D