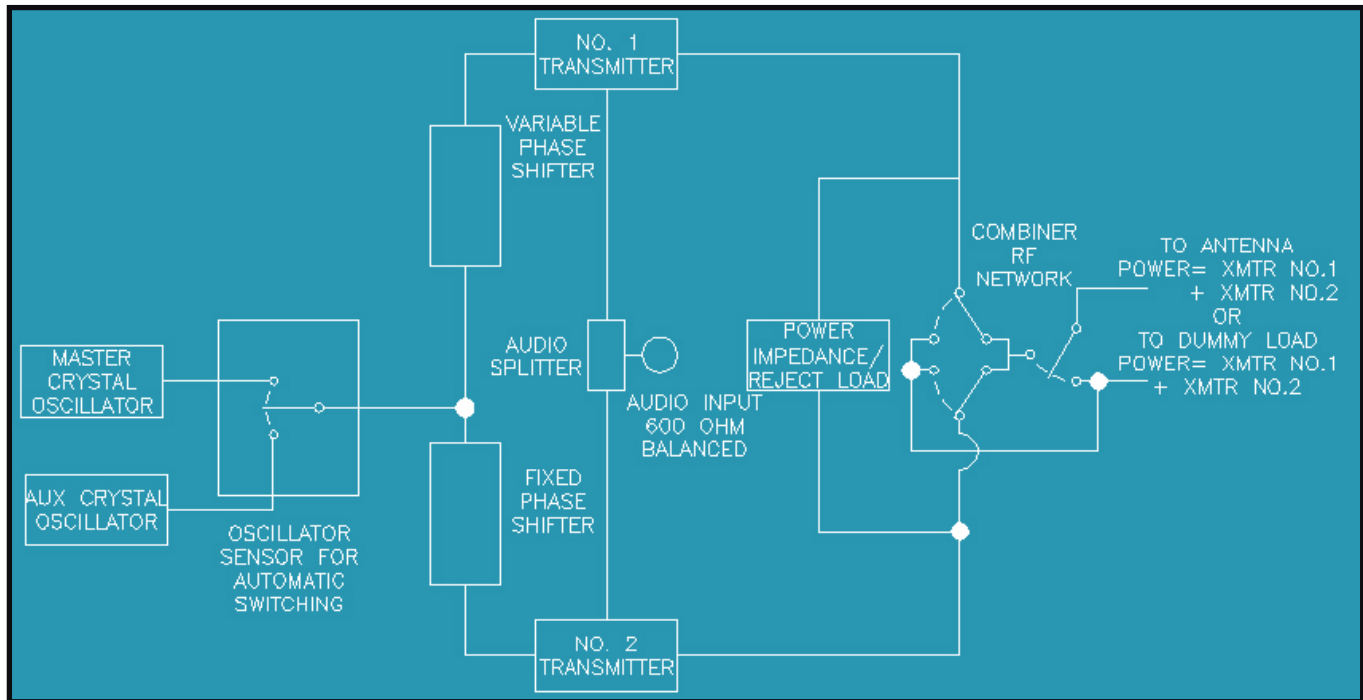




KINTRONIC LABORATORIES, INC.

AM/ MW TRANSMITTER COMBINER SERIES



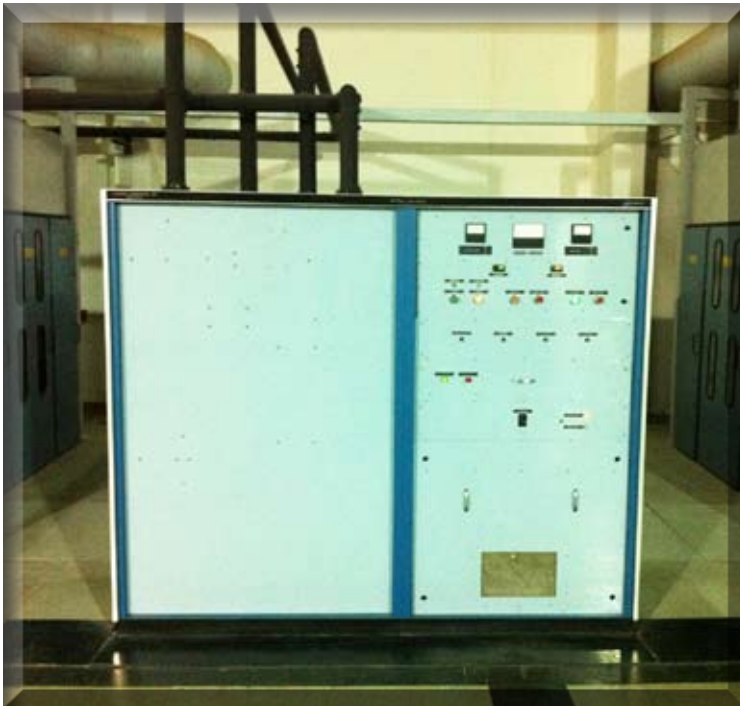
FEATURES OF THE MODEL CB- SX, 10X, 20X, 30X, SOX, 100X, 200X AM/MF TRANSMITTER COMBINERS ALSO AVAILABLE: DESIGNS FOR 300KW OR HIGHER

- Main and Auxiliary Crystal Oscillators With Local, Remote or Automatic Switching
- Total Output and Reject Current Meters with Remote Output
- Local or Remote Selection of Either Transmitter To Antenna, Combiner Or Dummy Load
- Presents $50 + j0$ Impedance At Each Transmitter Input Port Independent of the Output Condition of the Other Transmitter
- Adjustable Transmitter Input Power Sensors With Automatic Switching of Failed Transmitter To Dummy Load
- High Performance Audio Splitter To Yield 600 Ohm Balanced Output With ≈ 10 dbm Level To Each Transmitter
- Power Imbalance/Reject Load Capable of Dissipating the RMS Power Output of One Transmitter For a Limited Time
- High RF Throughput Efficiency
- Low Noise and Intermodulation Distribution Characteristics
- Rigid Transmission Line U-Links For Combiner To Transmitter Interconnects Are Include

AM/ MW TRANSMITTER COMBINER SERIES CABINET DESCRIPTION

The combiner cabinet consists of a one-, two- or three bay enclosure depending on the power level. In the case of a 50 or 100 KW combiner a two-bay enclosure is required with the left cabinet containing RF electrical components forming the combining "T" network along with metering and sampling components. The front has a plain panel section, and the rear has a full length removable hinge type door with a door handle latch. The right cabinet contains the reject resistive load, capacitors, and metering transformer, which forms the bridging circuit for the combiner "T" network all in the back half of the cabinet with a hinged back door. The front half of the cabinet has a multi-section front panel on which are mounted the following controls, metering and sampling outputs:

1. Combiner AC power circuit breaker
2. Total output current meter
3. Reject current meter
4. Sampling voltage outputs for No. 1 transmitter input, No. 2 transmitter input and total output
5. Oscillator selector momentary push-buttons lighted when active
6. Momentary push-buttons for combiner operational mode controls which are: No. 1 transmitter to antenna/No. 2 transmitter to dummy, No. 2 transmitter to antenna/No.1 transmitter to dummy, combine and automatic. These buttons are lighted when the designated mode is in use.
7. The Model CB-200X 200KW Combiner as shown below is supplied in a 3-bay configuration where the left bay is the imbalance load, the middle bay is the RF combining network and the right bay is the control rack.



SPECIFICATIONS

MODEL No. CB - 5X, 10X, 20X, 30X, 50X, 100X, 200X

Radio Frequency (RF)

- RF Carrier Output 5,10, 20, 30, 50, 100 or 200 KW*
- Maximum Output Continuous 125% positive peak sinusoidal modulation
- RF Range A specified frequency in the range 535 to 1705KHz
- Frequency Stability ± 5 Hz in ambient temperature range -10 to 50 degrees centigrade
- Transmitter Input Impedance 50 ohms unbalanced
- Combiner Output Impedance 50 ohms unbalanced

Audio

- Audio Input Impedance 600 ohms balanced
- Audio Input Level 0 ± 12 dbm
- Audio Output Each Channel +10 dbm nominal
- Dual Audio Output Impedance 600 ohms balanced
- Audio Frequency Response ± 0.1 dB from 20 to 20,000 Hz
- Audio Harmonic Distortion Less Than 0.15% (THO) @ +10 dbm Input from 20 to 20,000 Hz
- Intermodulation Distortion -72 dB wideband below +10 dbm/600 ohms (SMPTE 4:1)
- Noise Less than 0.025%

Electrical

- Power Supply Requirements Single phase or three phase, 208 to 230V, 50/60Hz, 0.75KV

*Other power levels are available upon request

Environmental

- Temperature -10 to +50 Degrees Centigrade
- Relative Humidity 0-90%
- Altitude 0-10,000 feet



AM/ MW TRANSMITTER COMBINER SERIES

SPECIAL FEATUERS

1. If one of the two transmitters drops below an adjustable preset power output level, the power sensor will automatically switch the full power transmitter directly to the antenna and the faulty transmitter will be switched to the dummy load port.
2. An output sensor is provided for the main crystal oscillator. If the output fails, an auxiliary backup oscillator is automatically switched on line.
3. In case of a failure of the A.C. power system, the control system memory will bring both transmitters on line in the automatic combined mode at full power output when power is restored.
4. Both the RF drive and audio drive systems are powered by a dual +1- 15 VDC power supply and a 24 VDC power supply.
5. Front panel jacks (BNC type) provide a sample of the input of each transmitter and total combiner output,
6. A front panel pullout drawer provides full access to all component units of the RF and audio drive systems.
7. Option to be introduced in 3rd Qtr, 1998 is a digitally synthesized dual output exciter with phase locked loop control and 0-SOW power output from each channel.

INSTALLATION MATERIALS SUPPLIED

1. Two 15-foot lengths of flexible coaxial 50 ohm cable with type BNC end fittings. Miniature cable size such as RG-188U may be used. This is for RF drive feed to each transmitter.
2. Two 15-foot lengths of two conductor shielded audio wire.
3. The rigid unpressurized transmission line U-links to connect the power output of each transmitter to the combiner.

KINTRONIC LABS ALSO OFFERS:

1. AM/MW Directional Antenna Phasing Systems
2. AM/MW Multiplexed Antenna Systems
3. AM/MW Line Terminating Units
4. AM/MW Dummy Loads
5. RF Open Frame or Vacuum Contactors
6. RF Patch Panels
7. Folded Monopole Kits
8. Frequency-Agile All-Band Transportable
9. Antenna
10. Standard Equipment Racks
11. Main/Auxiliary/Dummy Load Switchers and Controllers
12. RF Meter Switches
13. Tower Lighting and Static Drain Chokes
14. Fixed and Variable Inductors
15. Rigid Transmission Line and Accessories
16. Custom Matrix Switching Cabinets For Multiple Transmitter, Antenna and Dummy Load Selection

PH: 1-423-878-3141
FAX: 1-423-878-4224

KINTRONIC LABORATORIES, INC.
P.O. BOX 845, BRISTOL, TN 37621

www.kintronic.com
kti@kintronic.com