

# DIRECTIONAL ANTENNA PHASING SYSTEMS AND EQUIPMENT

## DESCRIPTION

All Phasetek Antenna Directional Phasing Equipment and Branching systems are custom engineered and designed. All parameters and specifications, provided by the Stations Consulting Engineer or Chief Engineer are reviewed and discussed with Phasetek's Engineering and Production Staff.

Each stage in the research, bidding, development and production of the system is done under the supervision and direction of a professional, experienced phasor systems manager, in conjunction with a staff of engineering, production construction experts, representing years of knowledge and success in providing high quality equipment and systems for the Broadcast industries R.F. requirements.

Budgetary Estimates, firm quotations detailing the entire system, Engineering Drawings and specifications, individual parts lists identifying component parts, circuit diagrams and package specifications are supplied with each installation.

Precise, detailed systems specifications are developed to assure maximum accuracy and the most efficient circuitry, guaranteeing performance to the Broadcasters requirements.

In our effort to provide you with the most comprehensive phasing system package available, we also provide coaxial transmission line, ground system material, phase monitors, field strength meters, complete sampling systems, R.F. Ammeters, all types of capacitors and other items essential to a directional array.

Phasetek offers one additional service. **We back up all our work.** We will install our units, if requested, and follow thru to the consultants and station owners satisfaction. Consult our plant for firm bids on this service.

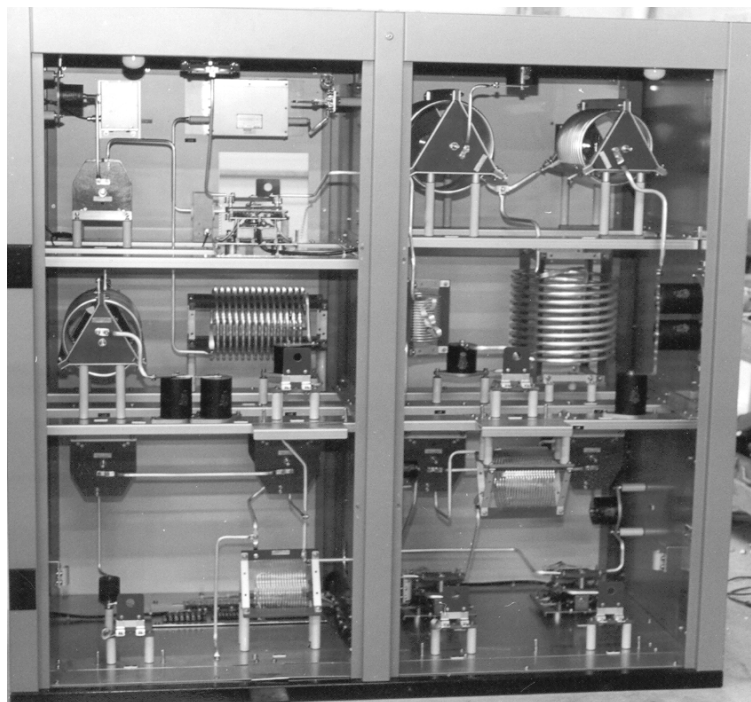
### STANDARD FEATURES:

- \* Unequaled quality and workmanship.
- \* Custom engineering and design.
- \* Broad power range.
- \* Wide tuning range.
- \* Adjustable under power.
- \* Inductors, components and accessories manufactured by Phasetek.
- \* Designed for minimal adjustments and maximum stability and efficiency.
- \* Broadband design for stereo compatibility and IBOC DIGITAL standard.
- \* Open panel or weatherproof cabinet tuning units and phasors.
- \* Installation service available.

**PHASOR (FRONT**



**PHASOR (REAR VIEW)**



## COMPONENTS: PHASOR & TUNING UNITS

1. All component voltage ratings are a minimum of at least 4.5 times the calculated RMS voltage.
2. All component current ratings are a minimum of at least one point eight (1.8) times the RMS current.
3. Vacuum capacitors are supplied with mounting flanges on both ends when specified.
4. Cast mica capacitors are supplied as standard.
5. Vacuum capacitors are used where high current dictates, or as an option, they may be used throughout the system in place of the cast mica capacitors.
6. All Phasetek layouts are designed for minimum interaction or coupling of components. Inductors are spaced at least 1/2 diameter from mounting surfaces and from adjacent inductors.
7. All tubing clamps are brass milled, silver plated, with tensioning screw for adjustment.
8. Inductor tap assemblies are fabricated of silver or tin plated copper strap.
9. RF switching will be provided, when required, for the specific modes of operation, with push- buttons and front panel indicator lights showing the mode of operation and contactor positions. Circuits are provided to fulfill 3rd class operation requirements. Terminal strip connections are provided for all remote control and transmitter control requirements.
10. Fixed inductors will be either silver or tin plated; variable inductors will be silver plated.

## **GENERAL INFORMATION**

1. Accessibility will be provided to all jacks so an operating impedance bridge can be used. Each jack is provided with two ground posts, 1.5 inches high and located on the copper strap.
2. Spare parts kits consisting of tubing, tap strap, ground straps, hardware and tubing/ribbon clamps can be provided when requested.
3. Copper ground strapping is provided. Size is dependent on current/voltage requirements.
4. "Pigtails" are provided for connection to your ground system from all panels and cabinets.
5. Field installation services can be provided when required. Rates will be quoted upon request.
6. Layout drawings and final R.F. drawings are provided for final approval by the consulting and/or station engineers after receipt of order.
7. When requested, networks will be pre-tuned to theoretical parameters before shipment.

# **SYSTEMS SPECIFICATIONS**

Every Phasetek Inc. Phasor System and Line Termination Unit is custom engineered, designed and manufactured after approval by the Consulting and/or Station Engineer.

## **STANDARD CONSTRUCTION: PHASOR**

1. Housed in single aluminum cabinet(s), width and depth (dependent on complexity) height 74 inches.
2. "Lift out", interlocked rear doors.
3. Painted Phasetek Inc. beige and gray.
4. Open panel phasor systems are available and are fabricated on 3/16" anodyne finished aluminum.
5. Uni strut provided for wall mounting on open panel type phasors.
6. Size of open panel is determined by the complexity of system and advised at time of bid.
7. Standard construction of cabinets or open panels have transmitter and/or dummy load input through the top and output to towers through the bottom.
8. All interconnecting tubing is silver or tin plated copper, size is determined by circuit current.
9. All inductors and capacitors above "ground" are mounted on steatite insulators. All grounded components are mounted directly on copper strap.
10. Front panel controls are provided with Phasetek counters and insulated couplers. All counter assemblies are pinned to couplers for positive action.
11. All test jacks are Phasetek P600-140-1 with Phasetek P600-140-3 shorting bars or Phasetek P600-140-4 hot-line jacks. Higher current applications utilize Phasetek P600-140-8 with Phasetek P600-140-10 shorting bars.

## **SYSTEMS SPECIFICATIONS**

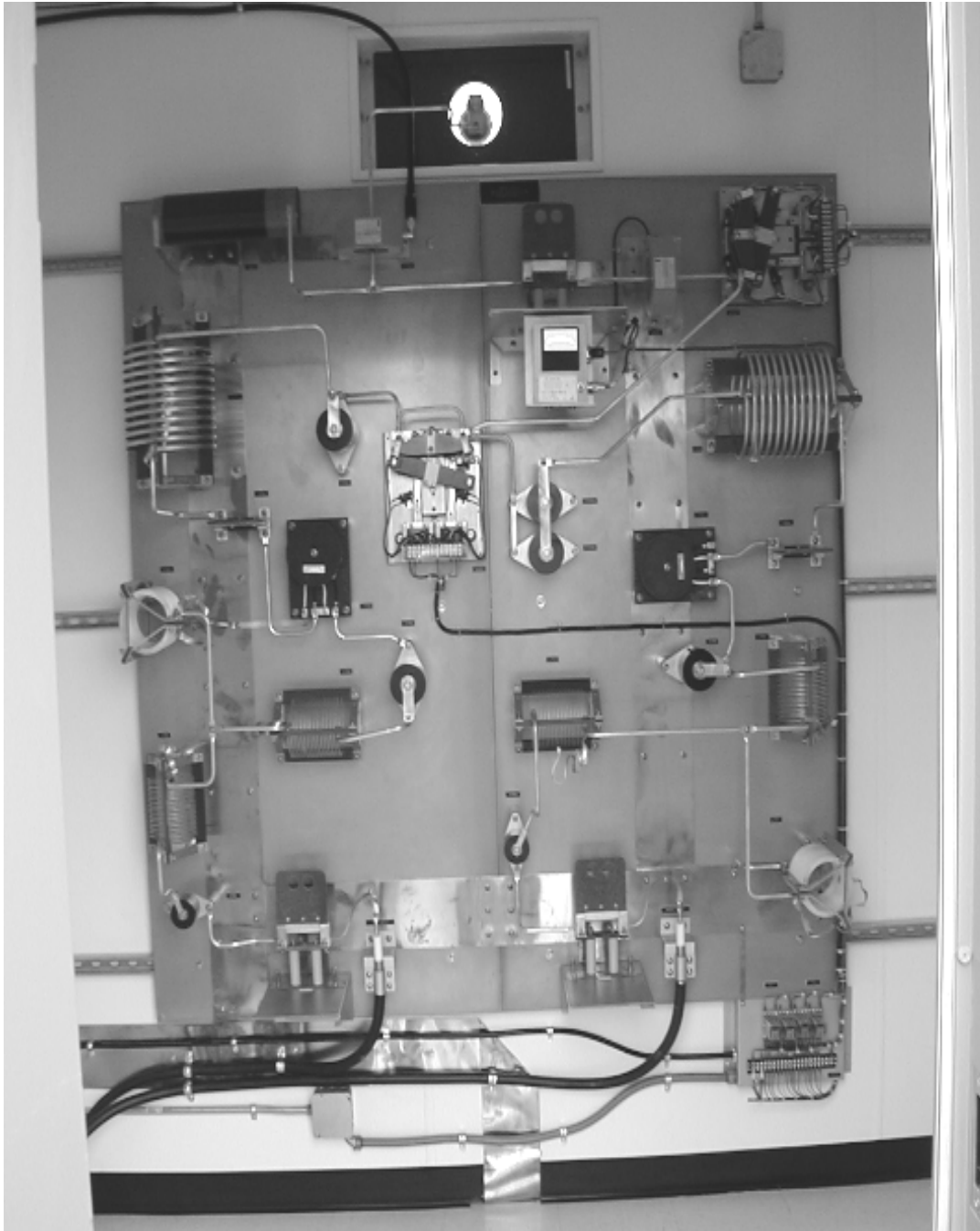
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### **STANDARD CONSTRUCTION: TUNING UNITS**

1. Open panel units are constructed on 3/16" alodine finished aluminum complete with uni strut for wall mounting. Size of panel is determined by the complexity of the system and is specified at time of quote and layout.
2. L.T.U.'s can be constructed in weather-proof aluminum cabinets with bottom and rear mounting flanges. Size is determined by the complexity of the system and is advised at time of quote and included in the layout drawings.
3. Standard construction of the L.T.U. panels have the input at the bottom left of the panel and the output at the top right.
4. All interconnecting tubing is silver or tin plated copper; the size is determined by circuit current.
5. All inductors and capacitors above ground are mounted on "steatite" insulators. All grounded components are mounted directly on copper strap.
6. All test jacks are Phasetek P600-140-1 with Phasetek P600-140-3 shorting bars or Phasetek P600-140-4 hot-line jacks. Higher current applications utilize Phasetek P600-140-8 with Phasetek P600-140-10 shorting bars.



9 TOWER, 50 KW DA-2 PHASOR SYSTEM



**OPEN PANEL LTU INSTALLATION**