

# Section B

Plates B-2700 to B-2799 Inc.

## SIGNALS

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### COLOR LIGHT SIGNALS

Styles "P-2" and "TP-2"



**Union Switch & Signal Co.**

**Swissvale, Pa.**

UNION SWITCH & SIGNAL CO.

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**GENERAL INFORMATION AND ORDERING INSTRUCTIONS FOR COLOR LIGHT SIGNALS**

In this catalog will be found plates and ordering references covering assemblies and detail parts of the Style "P-2" and "TP-2" Color Light Signals.

**Style "P-2" and "TP-2" Light Signals**

These Signals are long range light signals with accurately located lamp sockets for medium bayonet rebased lamp. They are furnished with either individual transformers for each lamp unit or with a terminal board and with all internal wiring.

Signals consist of a signal case containing the lamp units, pipe socket for attaching the case to the top of the mast, a ladder, mast-socket and pinnacle. The signal may be arranged for mounting directly on a foundation or on top of a single or double instrument case. By means of the adjustable pipe socket any desirable variation of the position of the signal in either the horizontal or vertical plane may be secured. The adjustments in these two planes are entirely independent. By using sighting telescope shown on plate B-2600 one man can quickly and accurately align the signal.

Special "deflecting prisms" of 10 or 20 degree spread can be applied over the  $8\frac{3}{8}$ " doublet lens where additional spread of light is required on account of curves. The 10 degree prism is sufficient in most cases. The 20 degree prism takes care of extreme requirements. Deflecting prisms spread the light in the horizontal plane and on one side only.

All signals will be furnished with 10-Volt, 18-Watt double filament lamps Ref. Bb, Plate B-2799 unless otherwise specified. A special 8-Volt, 10-Watt, lamp is available for use to meet the demands for extreme power economy when power is to be supplied from primary batteries. It is advisable that signals be approach lighted when this lamp is used.

Signal cases for D.C. are provided with A. R. A. terminals to which the lamp receptacles are connected. (Except where both Style "L-10" Lightout Relay and backlight are used.) These same cases can be used for A.C. where one transformer furnishes power for all units, the secondary circuit being selected through the proper control relays. A more satisfactory arrangement for A.C. is pro-

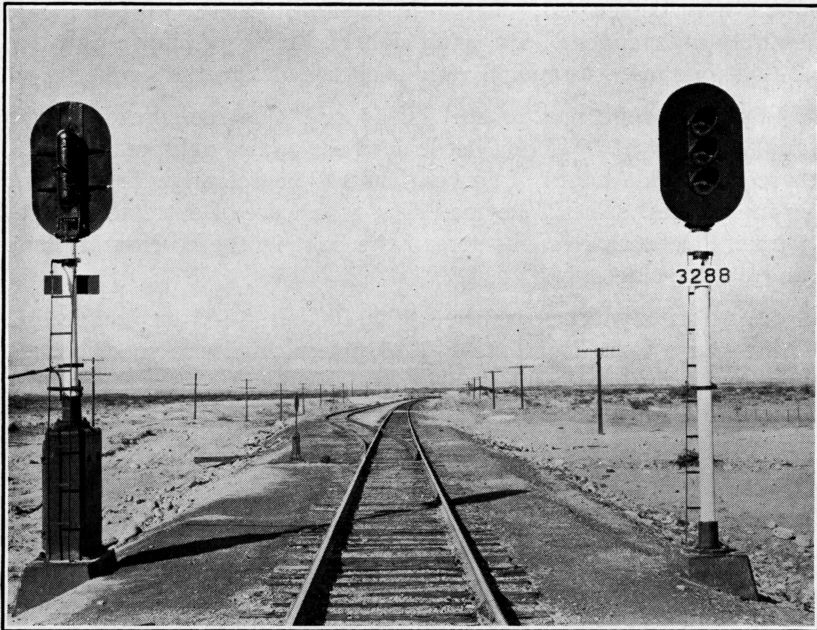
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vided in the signal case with individual transformers for each lamp unit. With this arrangement the primary circuits of the transformers are selected through the proper control relays. This provides better voltage regulation on the lamps and considerably reduces the current carried by the relay contacts. Lamp receptacles are connected directly to the transformer secondary. Outside wires are brought to the primary side of the transformers in A.C. signals or to the A. R. A. terminals in D.C. signals. This arrangement affords a ready means for connecting instruments when taking voltage and current readings.

Both the case and the lamp units are ventilated. A hasp is provided for locking the door.

### Lamp Unit

Lamp Units consist of an accurately machined lens casting to which is assembled a lamp receptacle and a doublet lens. The lamp receptacle is supported in a fixed relationship to the lenses in order that the lamps, which are accurately based, may be interchangeable.



STYLE "P-2" COLOR LIGHT SIGNALS ON THE L. A. & S. L. R. R.

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Thus the lamp filament is brought to the exact focal point of the lens system and the range of the signal is not altered when a new lamp replaces an old. The superiority of the Style "P-2" and "TP-2" signals is largely due to the accuracy with which the lamp units are constructed and adjusted. For this reason it is not desirable to have any changes made in the field which may affect the relative location of lenses and lamp receptacle. Lamp Units as a whole are interchangeable, and can be readily removed from the front of the signal case.

For "close up" indications lamp units are equipped with a deflecting unit, providing a spread of 25°, if specified a 50° spread deflecting unit will be supplied.

Style "L-10" Lightout Relays of the design shown on Plate E-5085 can be furnished on all Style "P-2" Signals, but where both "L-10" Lightout Relays and backlights are used, the terminal board is omitted and outside wires are connected direct to A. R. A. binding posts on relay and lamp receptacles.