Release of Locking

Some railroads use “two-track-circuit” release of locking at the ends of passing tracks in CTC territory, i.e., a train must occupy the OS switch detector track circuit, then occupy the next track circuit, before locking is released. Do you use this type of circuit? Please give reasons for use or non-use, as well as advantages of your particular practice.

Two-Track-Circuit Release

By J. M. Rice
Assistant Signal Engineer
Atchison, Topeka & Santa Fe
Topeka, Kan.

A two-track-circuit release of time or approach locking is used on the Santa Fe. Time locking, restored by occupancy of the detector section and a receding section, or by an automatically controlled time element, is the only pre-requisite to the release of electric locking where the single track circuit system of release is in use, any one of the several things that can cause a track relay to drop momentarily and then pick up again, can also, inadvertently, cause the locking to be released. And this can happen while a train is approaching at such location and rate of speed as to make it impos-
possible to stop the train short of the
governing signal. Section men work-
ing with track tools, signalmen
working with their tools and test
equipment, defective insulation, de-
fective bonding and open wires can
cause locking to be released as de-
scribed above. The "two track cir-
cuit release" is to be preferred be-
cause the above mentioned dangers
are minimized.

Use Two Circuits,
In OS Section

By R. E. Testeraman
Assistant Superintendent
Communications & Signals
St. Louis-San Francisco
Springfield, Mo.

The use of "two-track circuit" re-
lease of locking reduces the possi-
bility of undesired release of such
locking due to momentary loss of
shunt or momentary drop of detec-
tor track circuit due to loose connec-
tion, broken bond wire, etc. We fa-
vor the use of this type of release at
remote switch locations where such
failures would give false indications
to the control operator as to the loca-
tion of trains.

At ends of passing tracks in CTC
territory, we use two track circuits
in the "OS" section, placing insu-
lated joints in the main line just in
the rear of the frog. One track cir-
cuit feeds from these joints to the
main line leaving signal, where it is
jumpered to the clearance point of
turnout and then feeds through the
 turnout to a joint located in the stock
rail just back of the heel of the
switch point. This arrangement pro-
vides for two track circuit release for
movements through the turnout as
well as on main line.

Advantage to Two-
Track-Circuit Release

By V. J. Dougherty
Leading Signalman
Southern Pacific
Tucson, Ariz.

The practice of releasing approach
locking through the back contacts of
the detector track and the track in
advance lessens the possibility of an
undesired release of the approach
locking; as would be the case in a
momentary failure of the detector
track, where it alone is used to effect
the release. The probability of both
track circuits failing simultaneously
is rather remote, except in the case
of insulation break-down in the di-
viding joints. This then, resolves it-
self into a maintenance problem, and
with any reasonable degree of ob-
ervation and periodic tests should offer no difficulty. The inherent weakness of this type of circuiting would seem to be the strongest argument against the practice of pre-conditioning. The gain in time is negligible when weighed against the potential danger it might cause.

Proper instruction of the control machine operator will also lessen the possibility of any undesired condition being set up. An experienced, capable operator, upon receipt of an OS indication, will not attempt to operate a switch until his indication lights indicate that the train has cleared the approach and detector sections and is in the advance section. This, of course, would not apply where pre-conditioning of switches is provided.

Aligning Searchlight Signal

What methods do you use for properly aligning searchlight signals?

Use a Target

By O. W. DeWitt
Superintendent of Construction
General Railway Signal Company
Rochester, N.Y.

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One of the most successful methods we have used in territory signaled with SA compound lenses, 5-watt lamp searchlight signals, is aligning the signal by means of a target. This target should consist of a 2-ft. diameter disk of \( \frac{3}{4} \) plywood painted white on one side. A black cross is then painted on the white background, consisting of a 2-in. vertical stripe and a 2-in. horizontal stripe intersecting at the center of the disk and running from edge to edge.

The target is then mounted on a \( \frac{3}{4} \) by 2" staff, long enough to place the target at a level of the locomotive engineer's eyes as he rides in the locomotive. The bottom end of the staff would rest on a cross-tie. To use this target, a man would be stationed at a location at which it had been previously determined the engineer should be able to see the signal. He would hold the target upright, cross side facing toward the signal to be aligned. Through the use of the sighting device built into the signal case, locate the hair line cross exactly on the cross of the target. Set and securely fasten the adjusting screws and after this has been done, take a final look through the sighting device to make sure tightening the adjustment screws has not changed the alignment. A target of this type can be seen several thousand feet under normal weather conditions.

Training Program

Do you have a training program for signal department employees?

On a Voluntary Basis

By V. O. Smelzer
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Atchison, Topeka & Santa Fe
Topeka, Kan.

Training programs in the Santa Fe signal department are on a voluntary basis. The men are encouraged to improve their position and knowledge through study of correspondence school courses and through classes conducted by signal department personnel. Such classes are organized on construction gangs when the men express a desire for such training. Classes are conducted after working hours usually one night each week. Attendance is not compulsory; however, a surprising number of men avail themselves of these opportunities.

Usually the foreman of the gang is directly in charge of the classes under the guidance and with the