## Signal Animator CTC MODE TRUTH TABLE

Inputs are active low. With nothing connected, they will be held at a high level and the driving circuit must connect it to ground to provide an active input. Low inputs on the table are indicated with a zero (0), high inputs with a (1), and inputs that do not matter are indicated with "X".

Inputs **RD**, **YL**, and **GN** are the DCA inputs. When all are high, the signal display will be dark. The **RD** input alone indicates Danger and when active it results in a stop indication, regardless of the state of the speed inputs. The **GN** input alone indicates Clear and when active it results in the most permissive indication being displayed, depending on the Entry and Approach speed inputs.

The Approach indication may be provided either by an **YL** active input alone, or by a combined **RD** and **GN** active inputs. This will result in a "something to stop" indication being displayed, with the something being determined by the Entry speed inputs. An active **YL** input at the same time as either or both the **RD** or **GN** inputs are active is invalid and will result in a dark signal display.

**EL**, **EM**, **ES**, and **ER** are the Entry speed inputs, indicating Limited, Medium, Slow, and Restricting speeds respectively. Their state indicates the speed restriction for the block the signal is protecting entry to.

**AL**, **AM**, **AS**, and **AR** are the Approach speed restricting inputs, indicating Limited, Medium, Slow, and Restricting speeds respectively. Their state indicates the speed the next signal should be approached at.

					Cianal Indiantian										
	ΑV	GN	YL	RD	AL	АМ	AS	AR	EL	EM	ES	ER	Signal Indication		
	Χ	1	1	1	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	dark		
				Þ	uark										
	Χ	1	0	0	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	dark		
Invalid inputs.	Х	0	0	1	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ			
Inv	Х	0	0	0	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ			
		YL [	DCA i	nput	active	with	GN or	· RD (	or bot	th act	ive.				
lications.	Х	1	1	0	X	X	Х	Х	Х	Х	Х	Х	Provides rule 436 with Paper on mast  Rule 437: Stop and Proceed		
"Stop" indications.				DC	A inp	uts: or	nly R[	) acti	ve.				Rule 439: Stop Signal		

	Toputo												<u> </u>					
	۸۷/	Inputs  V GN YL RD AL AM AS AR EL EM ES ER									Signal Indication							
	AV												0 0 0-					
Restricting indication.	X	1	0	1	X	X	X	X	X	X	X	0	Low signal output used for medium head					
testri	X 0 1 1 X X X X X X X 0  Entry speed input ER active with YL or GN input active.										0							
- ·=	I I I I I I I I I I I I I I I I I I I										Rule 436: Restricting Signal							
l ai	X	1	0	1	X	X	X	X	X	X	0	1	Low signal output					
DCA inputs: RD and GN active, or YL active. "Something to Stop" indications.	X	1	1	0	X	X	Х	X	Х	X	0	1	used for medium head					
YL a	_			·	l inpu	Rule 435: Slow to Stop												
e, or licati	X	1	0	1	Х	Х	Х	Х	Х	0	1	1	S Considerante 404					
GN active, or YL Stop" indications.	X	0	1	0	Χ	Х	Χ	Χ	Х	0	1	1	Provides rule 421 with \( \bigcap \) plate on mast					
SN a		Entry	spee	d inp	uts: I	EM act	ive; E	S an	d ER	not a	ctive.		Rule 427: Medium to Stop					
nd c	Х	1	0	1	Χ	Х	Χ	Χ	0	1	1	1	ig ig					
puts: RD and Something to	Х	0	1	0	Χ	Χ	Χ	Χ	0	1	1	1						
uts:	Er	itry s	peed	input	s: EL	active	; EM,	ES,	and E	R not	activ	ve.	Rule 421: Limited to Stop					
inpu "Sc	Х	1	0	1	Χ	Χ	Χ	Χ	1	1	1	1	<b>૧</b> 🔑 🔰					
DCA	Х	0	1	0	Χ	Χ	Χ	Χ	1	1	1	1						
	No entry speed inputs active.												Rule 411: Clear to Stop					
ĕ,	Χ	0	1	1	Χ	Χ	Χ	0	Χ	Χ	0	1	dark					
acti		"Slow to Restricting" indication is invalid.											dark					
Entry speed inputs: ES Something" indications.	Х	0	1	1	Х	Х	0	1	Х	Х	0	1	8					
ed inp g" indi	Approach speed inputs: AS active; AR not active.												Rule 434: Slow to Slow					
try spe methin	Х	0	1	1	Χ	0	1	1	Х	Х	0	1	8					
ve, En to Soi		App	roacl	n spe	ed inp	outs: A	M ac	tive;	AS n	ot act	ive.		Rule 433: Slow to Medium					
SN active; "Slow to	Х	0	1	1	0	1	1	1	Х	Х	0	1	3					
puts: only G ER inactive.	Ap	proac	ch spe	eed ir	puts	: AL a	ctive	; AM i	and A	S not	acti	ve.	Rule 432: Slow to Limited					
DCA inputs: only GN active; Entry speed inputs: ES active, ER inactive. "Slow to Something" indications.	Х	0	1	1	1	1	1	1	Х	Х	0	1	Low signal output used for medium head					
DCA	No Approach speed inputs active.											Rule 431: Slow to Clear						

	AV	GN	YL	RD	AL	АМ	AS	AR	EL	ЕМ	ES	ER	Signal Indication				
e, ES	Х	0	1	1	Х	Χ	Х	0	Х	0	1	1	Provides <b>rule 420</b> with ▶ plate on mast				
4 activ ations	Approach speed inputs: AR active.												Rule 426: Medium to Restricting				
uts: Eľ I" indic	Х	0	1	1	Х	Х	0	1	Х	0	1	1	<u></u>				
speed inputs: EM activ Something" indications		App	roacl	n spe	ed in		Rule 425: Medium to Slow										
try spe to Son	Х	0	1	1	Х	0	1	1	Х	0	1	1	8				
ve; En edium	Approach speed inputs: AM active; AR and AS <i>not</i> active.												Rule 424: Medium to Medium				
only GN active; Entry inactive. "Medium to	Х	0	1	1	0	1	1	1	1	0	1	1	3				
only only inacti	Арр	roach	spee	ed inp	uts: A	ive.	Rule 423: Medium to Limited										
DCA inputs: only GN active; Entry speed inputs: EM active, and ER inactive. "Medium to Something" indications.	Х	0	1	1	1	1	1	1	1	0	1	1	Provides <b>rule 416</b> with L plate on mast				
DCA		No	Appr	oach	spee	d restr	iction	inpu	ts are	e acti	ve.		Rule 422: Medium to Clear				
i, EM, IS.	Х	0	1	1	1	1	1	0	0	1	1	1	8				
EL active, indications			Δ	pproa	ach s	peed ir	nputs	: AR	active	e.			Rule 420: Limited to Restricting				
uts: El ng" ind	х	0	1	1	1	1	0	1	0	1	1	1	<b>3</b>				
ed inpomethi	Approach speed inputs: AS active; AR <i>not</i> active.											Rule 419: Limited to Slow					
only GN active; Entry speed inputs: ER inactive. "Limited to Something"	Х	0	1	1	1	0	1	1	0	1	1	1	8				
ve; En Limite	Αŗ	proa	ch sp	eed ir	nputs	: AM a	ctive	; AS a	and A	R not	activ	/e.	Rule 418: Limited to Medium				
GN acti	Х	0	1	1	0	1	1	1	0	1	1	1	3				
only ( ER ina	Арр	roach	spee	ed inp	uts: A	AL activ	ve; Al	M, AS	, and	AR n	ot act	ive.	Rule 417: Limited to Limited				
puts	Х	0	1	1	1	1	1	1	0	1	1	1	3				
DCA	No Approach speed restriction inputs are active.										Rule 416: Limited to Clear						

				G: 17 I: ::												
	AV	GN	YL	RD	AL	АМ	AS	AR	EL	EM	ES	ER	Signal Indication			
	Х	0	1	1	Х	Χ	Х	0	1	1	1	1	Low signal output used for medium head			
	Approach speed inputs: AR active.												Rule 410: Clear to Restricting			
	1	0	1	1	Х	Х	0	1	1	1	1	1	° 8 8			
		Арр	roacl	n spe	ed inp	Rule 409: Clear to Slow										
	0	0	1	1	Х	Х	0	1	1	1	1	1	9 8 8			
DCA inputs: only GN active; no entry speed inputs active. "Clear to Something" indications.	AV	active	e; Apı	oroac	h spe	ive.	Rule 414: Advance Clear to Slow									
inputs	1	0	1	1	Х	0	1	1	1	1	1	1	Provides <b>rule</b> 406 with plate on mast Plin signal output used for medium head			
speed	Approach speed inputs: AM active; AS and AR <i>not</i> active.											/e.	Rule 407: Clear to Medium			
o entry ng" ind	0	0	1	1	Х	0	1	1	1	1	1	1	ြံ မြိန်			
only GN active; no entry speed i "Clear to Something" indications.			AV ac	tive;	•	Rule 413: Advance Clear to  Medium										
y GN ac	1	0	1	1	0	1	1	1	1	1	1	1	High signal output used			
its: only	Approach speed inputs: AL active; AM, AS, and AR <i>not</i> active.												for medium head Medium signal output used for low head  Rule 406: Clear to Limited			
CA inpu	0	0	1	1	0	1	1	1	1	1	1	1	<b>~</b>			
DO		Α	V act			ach sp and A				active	;		Rule 412: Advance Clear to Limited			
	0	0	1	1	1	0	1	1	1	1	1	1	9 9 8			
		Δ	V act	tive; l	No Ap	proac	h spe	ed in	puts a	active	١.	•	Rule 415: Advance Clear To Stop			
	1	0	1	1	1	1	1	1	1	1	1	1	9 9 8			
			١	No Ap	proad	ch spe	ed inp	outs a	ctive				Rule 405: Clear Signal			

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