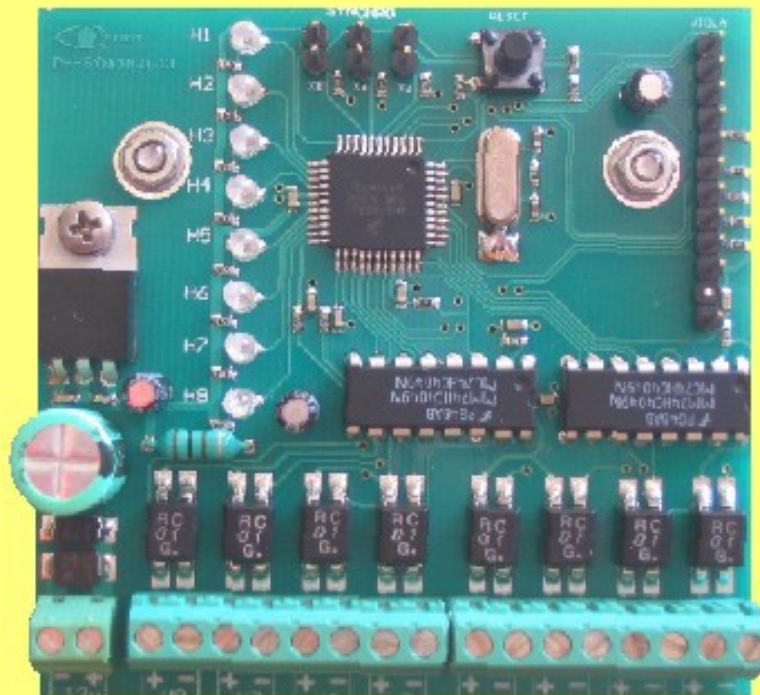
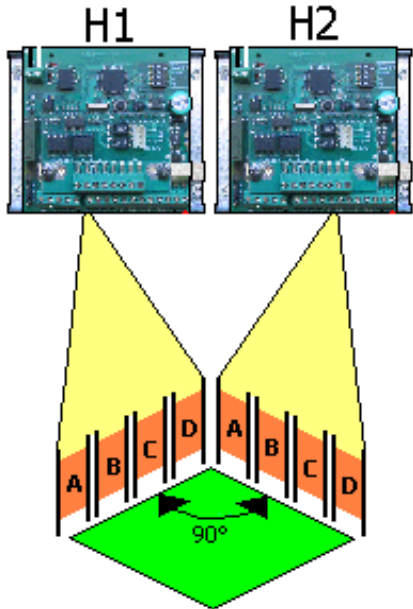


Synchronizing HUBs TC (rev 2)

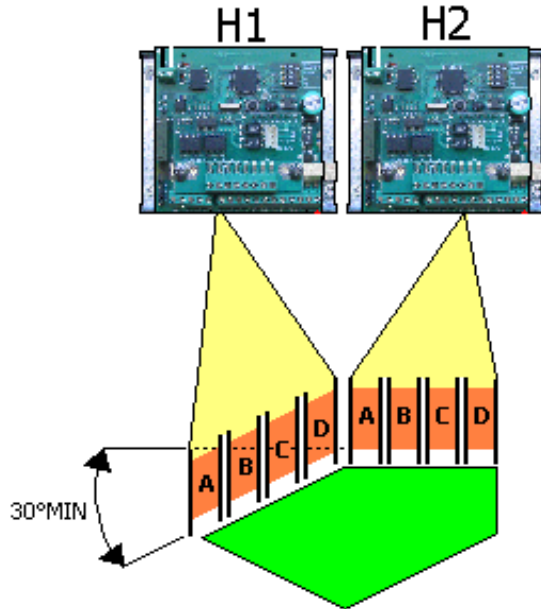


TWO OR MORE HUBS WORKING TOGETHER WITHOUT INTERFERENCE PROBLEMS

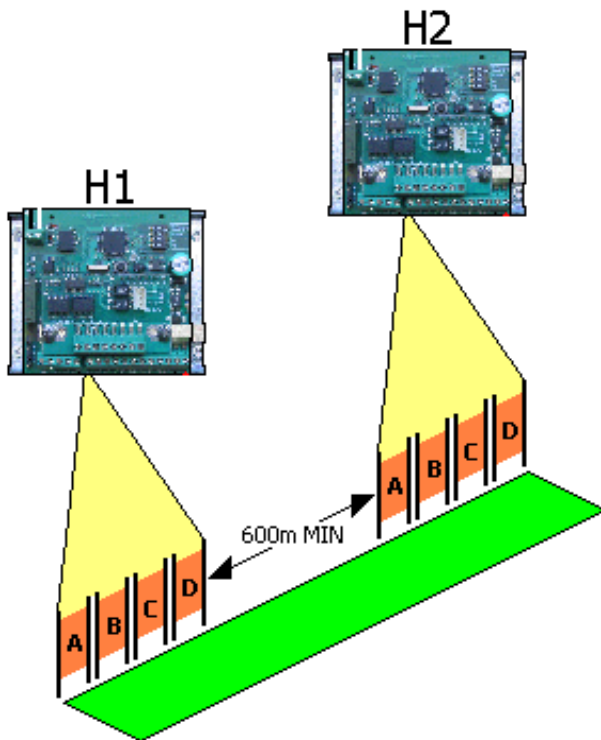
WHEN NONE OF THE BEAMS OF A COLUMN CONNECTED TO ONE HUB IS COUPLED DIRECTLY WITH ANY COLUMN OF A SECOND HUB.



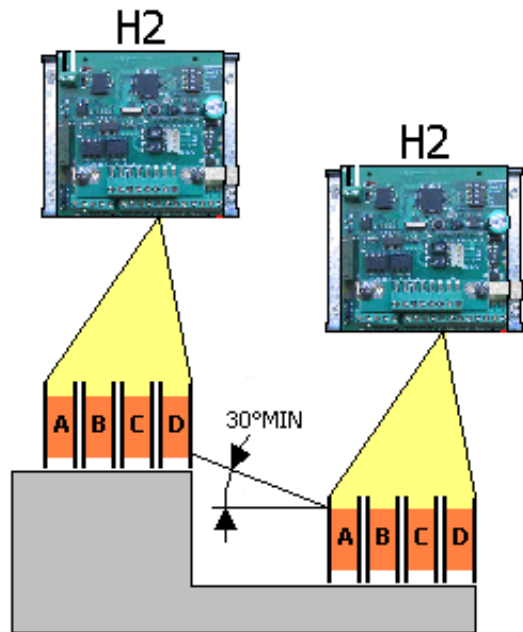
AT RIGHT ANGLE



AT ANGLE OF AT LEAST 30°



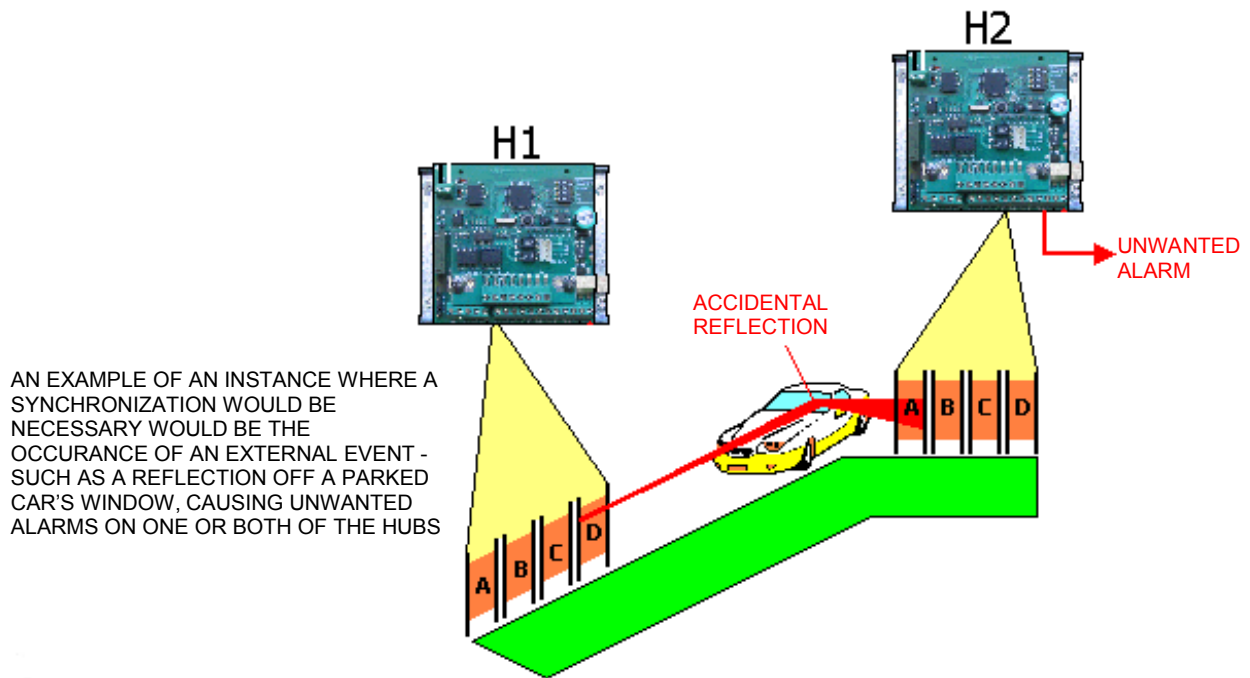
IN A STRAIGHT LINE AT A DISTANCE GREATER THAN 2000 FT. (600m)



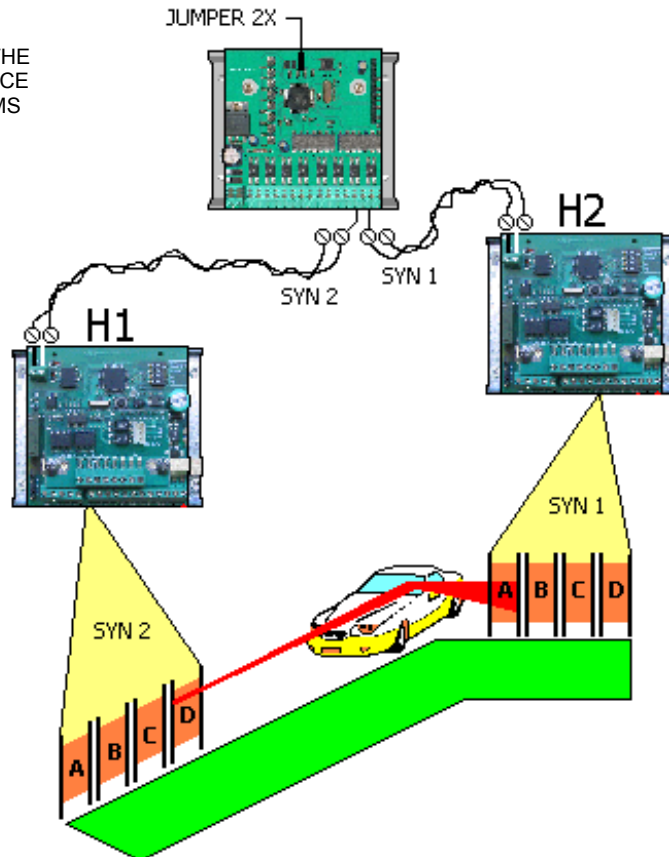
OR ON A VERTICAL ANGLE OF AT LEAST 30°

WHEN IT IS NECESSARY TO SYNCHRONIZE TWO OR MORE HUBS

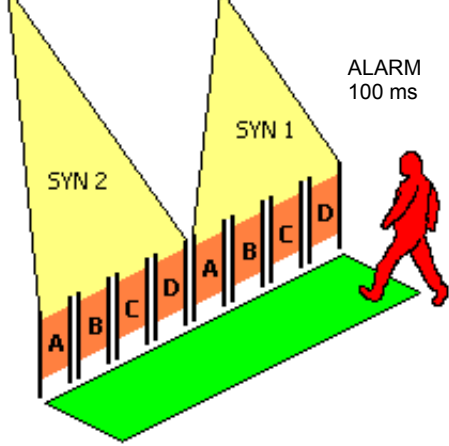
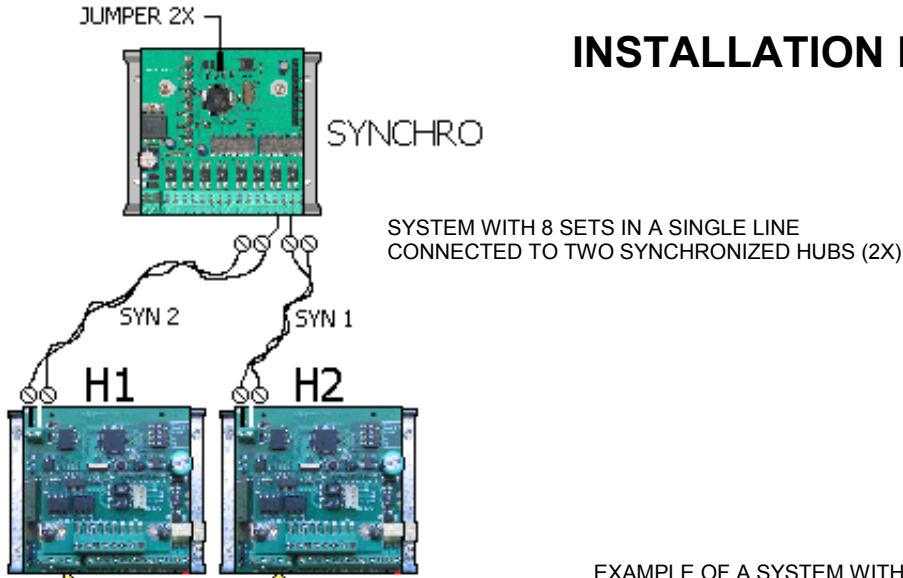
WHEN AT LEAST ONE BEAM OF A COLUMN CONNECTED TO A HUB CAN BE COUPLED (EVEN INDIRECTLY) WITH A COLUMN OF A DIFFERENT HUB.



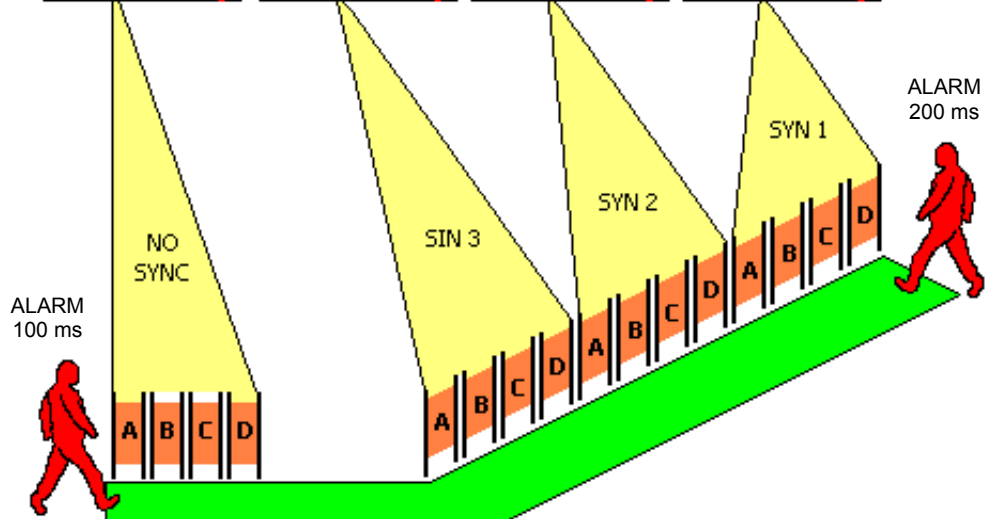
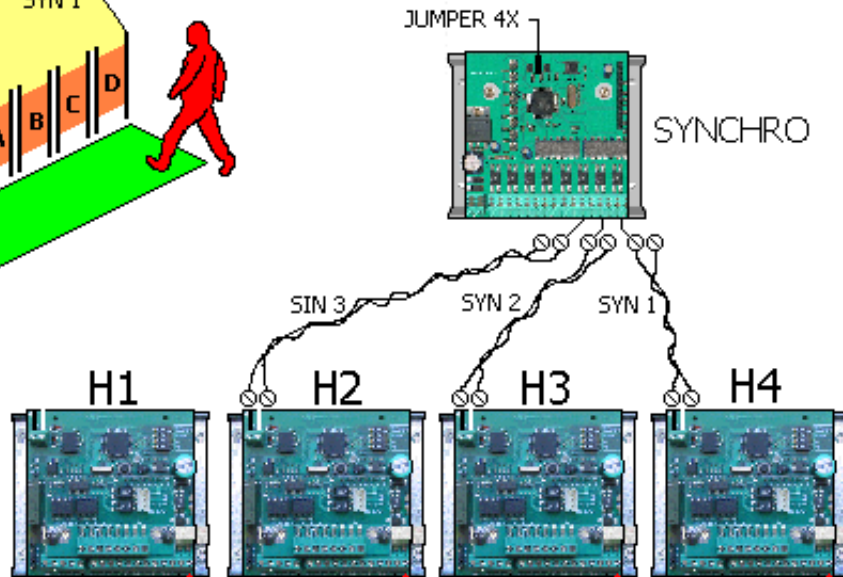
SYNCHRONIZING THE HUBS MAKES THE SYSTEM IMMUNE FROM INTERFERENCE CAUSED BY OTHER BARRIER SYSTEMS OPERATING IN THE SAME AREA



INSTALLATION EXAMPLES



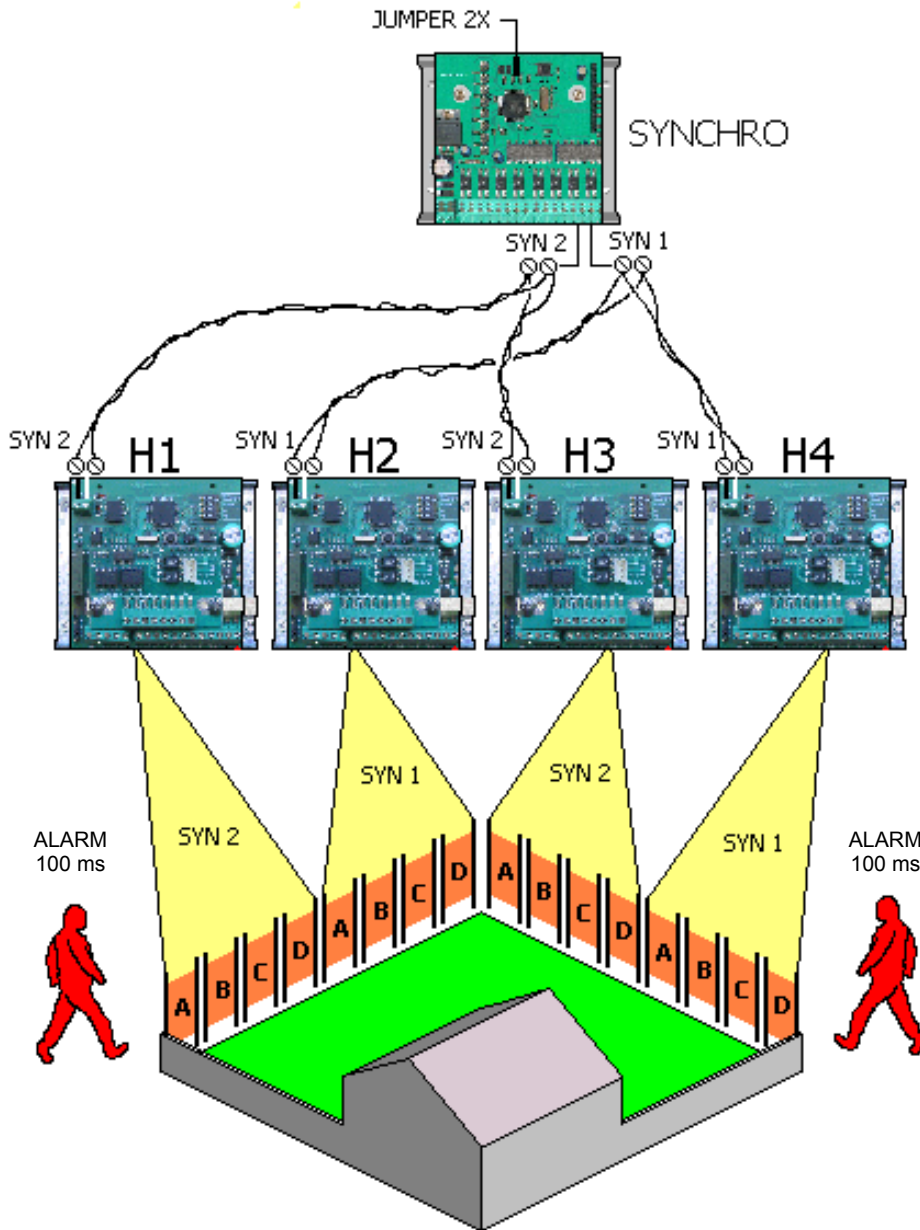
EXAMPLE OF A SYSTEM WITH 16 COLUMNS:
12 SETS ARE IN-LINE AND SYNCHRONIZED (4X) AND
4 SETS ARE MOUNTED OUT-OF-LINE WITHOUT A SYNCHRONIZER.



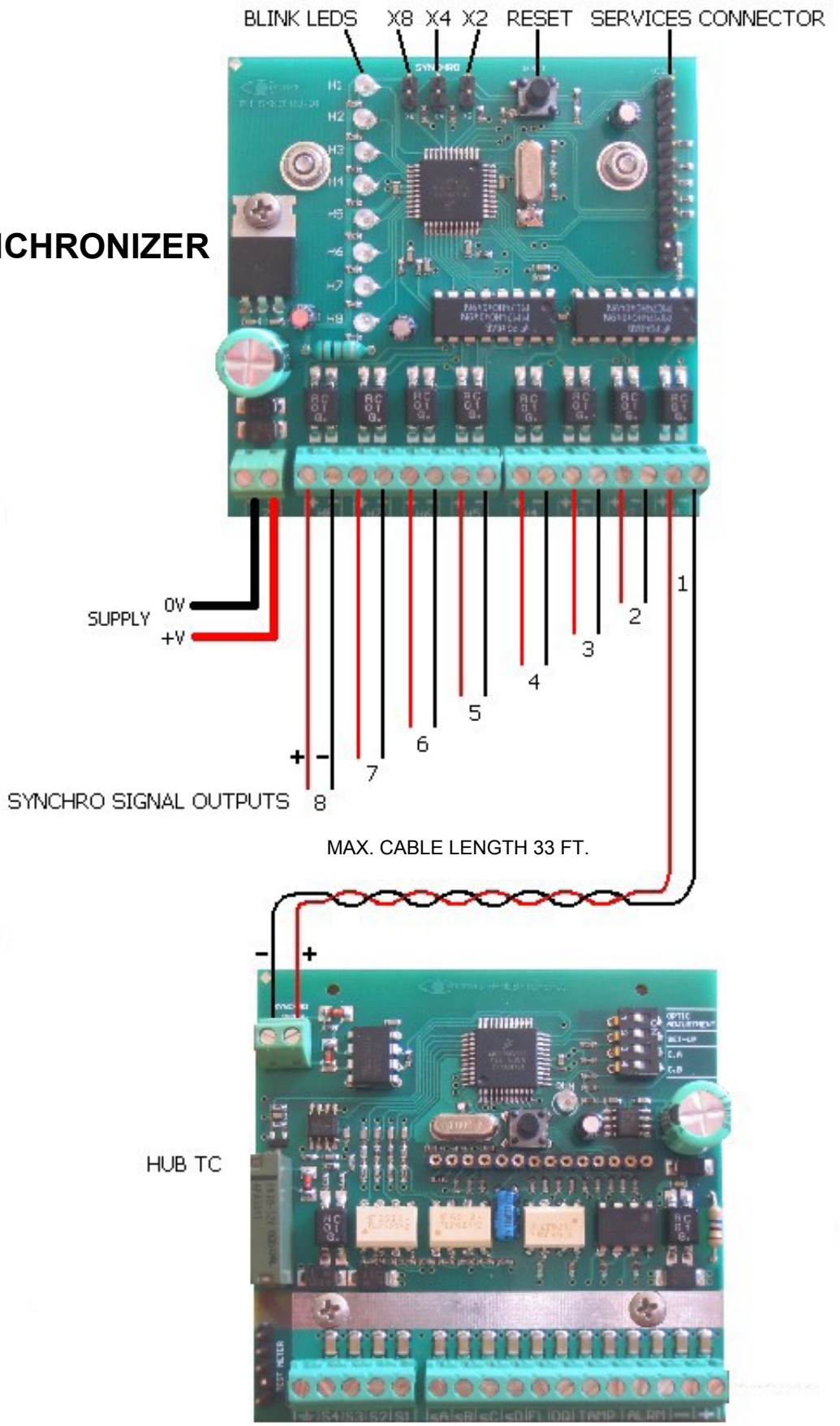
TYPICAL EXAMPLE OF AN INSTALLATION WITH 2 SIDES COMPOSED OF 8 SETS EACH.

THE SIDES ARE PERPENDICULAR SO IT WILL BE SUFFICIENT TO SYNCHRONIZE THE SETS IN EACH LINE (2X) SO THE SETS ON ONE SIDE DO NOT INTERFERE WITH THE SETS ON THE OTHER SIDE.

OUTPUTS SYN1 AND SYN2 ARE CONNECTED TO TWO HUBS IN PARALLEL. THE SYNCHRONIZER IS DESIGNED TO DRIVE UP TO 5 HUBS FOR EVERY SYN OUTPUT (FOR A TOTAL OF 40 HUBS).



SYNCHRONIZER



SYNCHRONIZER SPECIFICATIONS

POWER SUPPLY:	9-16Vdc 200mA MAX (40 HUB TC connected)
OUTPUTS:	N° 8 BRIDGED 0-5V / FAN OUT = 5
JUMPER X2:	ENABLES OUTPUTS SYNC1-2 LED BLINK 1-2 HUBS IN FULL SPEED – ALARM 100milliseconds
JUMPER X4:	ENABLES OUTPUTS SYNC1-2-3-4 LED BLINK 1-2-3-4 HUBS IN HALF SPEED – ALARM 200milliseconds
JUMPER X8:	ENABLES ALL OUTPUTS AND ALL LED BLINK HUBS IN LOW SPEED – ALARM 400milliseconds
RESET:	BLOCKS ALL THE SYNC OUTPUTS AND THE CONNECTED HUBS
SERVICE CONN.:	PROGRAMMING CONNECTOR
SIGNALLING:	N° 8 BLINK LED
CONNECTIONS:	SYNC CABLE LENGTH MAX = 33 FT.

