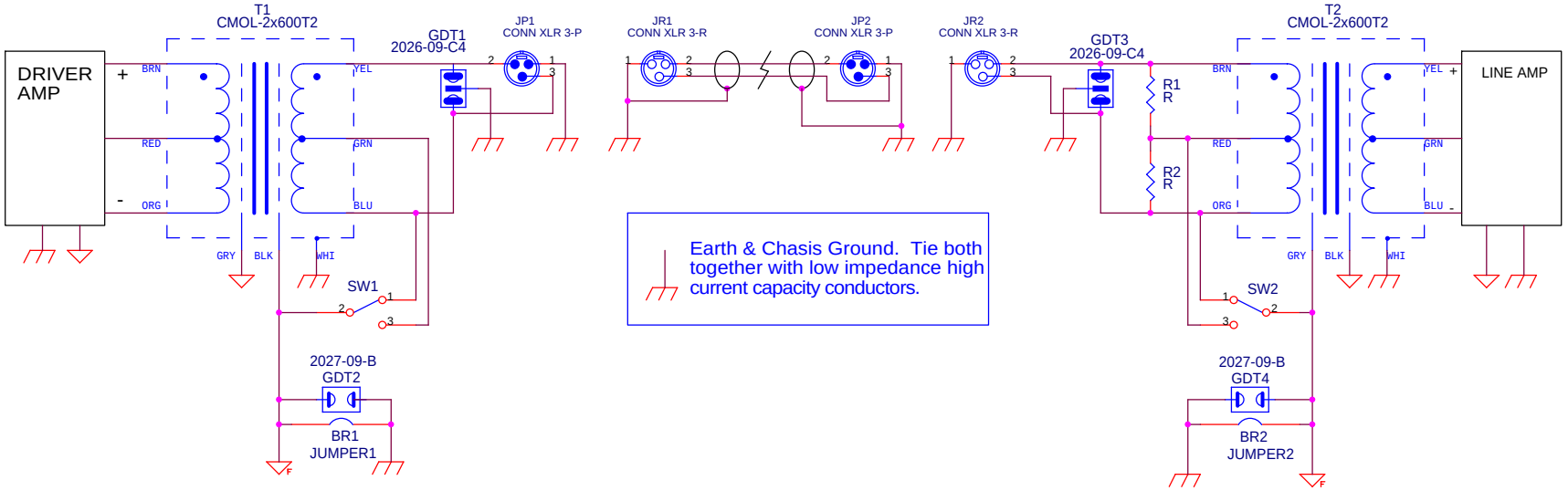
NOTE: T1 may also be replaced with a
CMOL-3x600T2 splitter. See AN-103



NOTES:

1. Earth ground should be solidly established if there is any possibility of lightning activity or other high voltage fields. Consider using copper plated grounding rods driven into moist soil.
2. Only use cable between JR1 and JP2 which has continuous heavy shielding. Lightning can cause very high peak currents.
3. All earth and chasis ground connections must be made using heavy gage wire to carry peak discharge currents.
4. SW1 and SW2 should both be in same position. Chose the position which gives best overall hum and buzz rejection.
5. R1 and R2 have equal values and are optional. For very long lines, choose value which results in best square wave response. They must be 1% resistors to retain best CMRR.
6. BR1 & BR2 allow earth/chasis ground to tie to signal ground if desired. All conductors which may carry high peak currents must be heavy as peak currents can be substantial.
7. Be sure that the earth grounds to the transformer cases are also solidly connected to the chasis grounds of the equipment that they connect to.
8. Driver and Line Amps may be either balanced or unbalanced.

The GDTs (gas discharge tubes) are manufactured by Bourns. The devices specified have a breakdown voltage of about 90 volts. Other manufacturers make GDTs which may also be successfully used. MOVs are not suitable because of non-linearaties. Zener diodes are also unsuitable due to inability to survive very high peak current discharges.

CineMag makes no warranty as to the suitability of this circuit for your application. Please consult with qualified engineers when installing any equipment which may be subject to contact with equipment energized by power line voltage or which may be subjected to lightning activity.

CineMag

9050 Independence Ave. Canoga Park, CA 91304 www.cinemag.biz

Title: Long Line Driver & Receiver CMOL-2x-600T2

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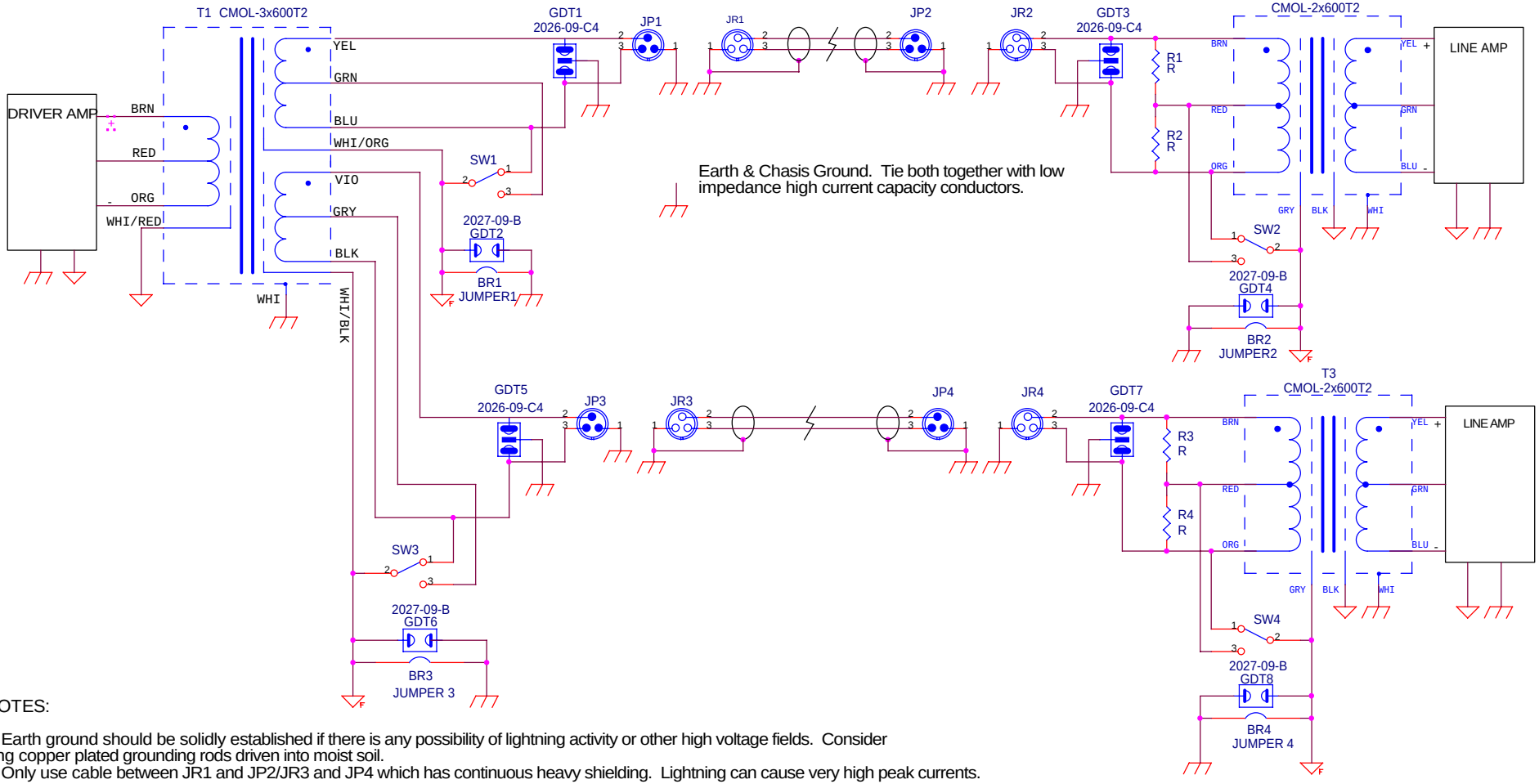

NOTES:

1. Earth ground should be solidly established if there is any possibility of lightning activity or other high voltage fields. Consider using copper plated grounding rods driven into moist soil.
2. Only use cable between JR1 and JP2/JR3 and JP4 which has continuous heavy shielding. Lightning can cause very high peak currents.
3. All earth and chasis ground connections must be made using heavy gage wire to carry peak discharge currents.
4. SW1 and SW2/SW3 and SW4 should both be in same position. Chose the position which gives best overall hum and buzz rejection.
5. R1 and R2/R3 and R4 have equal values and are optional. For very long lines, choose value which results in best square wave response. They must be 1% resistors to retain best CMRR.
6. BR1 - BR4 allow earth/chasis ground to tie to signal ground if desired. All conductors which may carry high peak currents must be heavy as peak currents can be substantial.
7. Be sure that the earth grounds to the transformer cases are also solidly connected to the chasis grounds of the equipment that they connect to.
8. Driver and Line Amps may be either balanced or unbalanced.

The GDTs (gas discharge tubes) are manufactured by Bourns. The devices specified have a breakdown voltage of about 90 volts. MOVs are not suitable because of non-linearaties. Zener diodes are also unsuitable due to inability to survive very high peak current discharges.
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9050 Independence Ave. Canoga Park, CA 91304
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Title: Long Line Driver & Receiver CMOL-3x600T2 & CMOL-2x-600T2

Size	Document Number	Rev
B	AN-103	A

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