

## Adaptive Remote Control ARC “e” Series: Applications, Changes, & Functionality

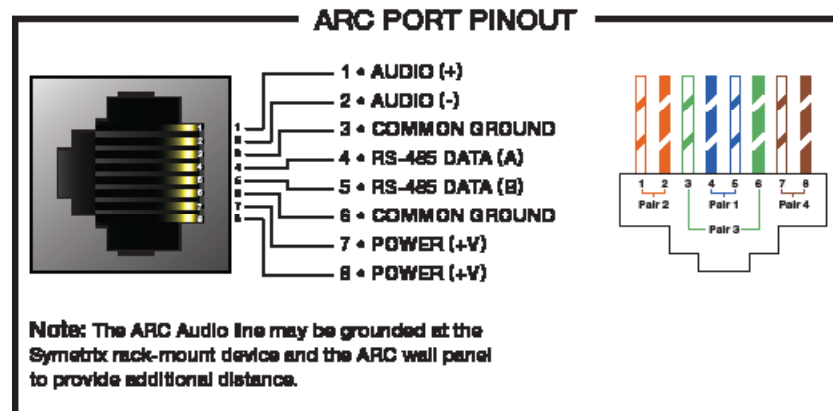
This tech tip will outline the ARC “e” series and list similarities and differences from the previous generation of remote controls. The “e” series controllers include the ARC-2e, ARC-K1e, ARC-SW4e, and ARC-EX4e. The ARC remotes use RS-485 to transmit/receive data and can be connected in a daisy chain, or star type cabling configuration. The ARC-SWK, ARC-XLR, and ARC-EXK are discontinued.

### Changes with the “e” series of ARC

- Simplification of industrial design and significant price reduction.
- Total possible RS-485 network addresses increased from 32 to 100.
- ARC binary DIP switches and jumpers have been replaced with dials.
- “ARC Audio” input, RS-485 and the DC voltage barrier strip have been removed.
- GPIO ports have been removed.
- There can be 16 buttons, and 1 rotary encoder per modular ARC RS-485 address.

### Similarities between the “e” remotes and their legacy counterparts

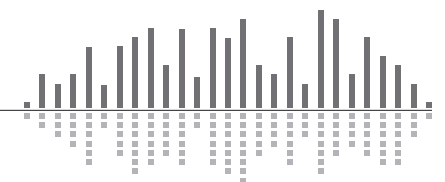
- Identical RJ45 pinout is used on the ARC and Symetrix DSP ARC port.



- CAT5, CAT5e, and CAT6 cable will provide power and RS-485 data to the ARC when using the Symetrix DSP ARC port.
- ARC can be wired in a “daisy-chain” or “star” configuration.
- Hardware lockout is still possible on the Modular ARC “e”.
- The expansion panels are interconnected through the use of 4 conductor jumpers.
- The ARC-K1e and ARC-SW4e can be expanded with the ARC-EX4e.

Brain Board Encoder	RS-485 Address	+ EX4e Address	+ EX4e Address	+ EX4e Address	+ EX4e Address
ARC-SW4e	(0 thru 99)	1	2	3	N/A
ARC-K1e	(0 thru 99)	0	1	2	3

- Software programming for the original modular ARC can be downloaded into modular ARC “e” devices and they will function.
- ARC-EX4e can be added to legacy ARC-SW4 and ARC-K1 units in order to expand an existing system.
- A mix of legacy ARC-EX4 and the ARC-EX4e can be used on a single RS-485 address and be programmed as a custom ARC.
- ARC-2e programming can be downloaded into legacy ARC-2 and ARC-2i remotes and they will function.



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ARC differences and similarities:

	ARC-2	ARC-2e	Modular ARC	Modular ARCe
Lockout Security	N/A	N/A	X	X
Max RS485 Addresses	32	100	32	100
Rotary Address Select	N/A	X	X	X
DIP Address Select	X	N/A	N/A	N/A
Legacy Software Support	X	X	X	X
Legacy Hardware Support	X	X	X	X
ARC Audio Input	X	N/A	X	N/A
Dual RJ45 Jacks	X	X	X	X
Baud Rate Select	X	N/A	N/A	N/A
GPIO	X	N/A	X	N/A
DC Power Barrier Strip	X	N/A	N/A	N/A
RS-485 Barrier Strip	X	N/A	N/A	N/A
Latest Firmware Version	3.09	3.09	1.29	1.29
LCD Display	8 Character	8 Character	N/A	N/A
Modular Expansion	N/A	N/A	X	X

Cable length limitations for ARC-2e DC power over CAT5 cable:

Total Cable Length (to end of chain)	Number of ARC in 1 Daisy Chain
110 - 500 ft.	4
220 - 500 ft.	3
280 - 800 ft.	2
350 - 1000 ft.	1

Cable length limitations for modular ARC DC power over CAT5 cable [(1)K1e+(1)EX4e]:

Total Cable Length (to end of chain)	Number of ARC in 1 Daisy Chain
640 ft.	4
792 ft.	3
1028 ft.	2
1396 ft.	1

For additional ARC programming tips, contact Symetrix technical support at [support@symetrix.co](mailto:support@symetrix.co).

