

A6 Electricity & Electronics 4th Edition

Chapter 7 Series-Parallel Circuits

Opening Your Class

KEY ELEMENT	EXAMPLES
Introduce Content	This course or class covers operation and service of Automotive Electricity and Electronics Systems . It correlates material to task lists specified by ASE and NATEF.
Motivate Learners	Explain how the knowledge of how something works translates into the ability to use that knowledge to figure why the engine does not work correctly and how this saves diagnosis time, which translates into more money.
State the learning objectives for the chapter or course you are about to cover and explain this is what they should be able to do as a result of attending this session or class.	Explain the chapter learning objectives to the students. 1. Identify a series-parallel circuit. 2. Identify where faults in a series-parallel circuit can be detected. 3. Calculate current flow and voltage drops in a series-parallel circuit. This chapter will help you prepare for the ASE Electrical/Electronic Systems (A6) certification test content area "A" (General Electrical/Electronic System Diagnosis).
Establish the Mood or Climate	Provide a <i>WELCOME</i> , Avoid put downs and bad jokes.
Complete Essentials	Restrooms, breaks, registration, tests, etc.
Clarify and Establish Knowledge Base	Do a round robin of the class by going around the room and having each student give their backgrounds, years of experience, family, hobbies, career goals, or anything they want to share.

ICONS	Ch07 Series-Parallel Circuits
      QUESTION   	1. SLIDE 1 CH7 Series-Parallel Circuits 2. SLIDES 2-3 EXPLAIN OBJECTIVES Check for ADDITIONAL VIDEOS & ANIMATIONS @ http://www.jameshalderman.com/ WEB SITE IS CONSTANTLY UPDATED 4. SLIDES 4-5 EXPLAIN Series-Parallel Circuits 6. SLIDE 6 EXPLAIN Figure 7-1 series-parallel circuit. 7. SLIDE 7 EXPLAIN Figure 7-2 complete headlight circuit with all bulbs and switches is a series-parallel circuit <u>DISCUSSION:</u> ASK STUDENTS TO DISCUSS THE USE OF SERIES-PARALLEL CIRCUITS IN AUTOMOTIVE WIRING SYSTEMS. WHAT ARE SERIES CONNECTIONS AND WHAT ARE THE PARALLEL CONNECTIONS FOR HEADLIGHT SWITCH? 8. SLIDE 8 EXPLAIN Series-Parallel Circuits 9. SLIDES 9-10 EXPLAIN Solving Series-Parallel Circuit Calculation Problems <u>DEMONSTRATION:</u> BUILD SERIES-PARALLEL CIRCUITS ON PROJECT BOARD IN FIGURES 7-2 AND 7-3 & SHOW STUDENTS HOW TO SOLVE PROBLEMS 11. SLIDE 11 EXPLAIN Figure 7-3 Solving series-parallel circuit problem 12. SLIDE 12 EXPLAIN Series-Parallel Circuit Calculation Examples 13. SLIDE 13 EXPLAIN Series-Parallel Circuit Calculation Example 1 14. SLIDE 14 EXPLAIN Figure 7-4 Example 1. 15. SLIDE 15 EXPLAIN Example 2 16. SLIDE 16 EXPLAIN Figure 7-5 Example 2. 17. SLIDE 17 EXPLAIN Example 3 18. SLIDE 18 EXPLAIN Figure 7-6 Example 3. 19. SLIDE 19 EXPLAIN Example 4 20. SLIDE 20 EXPLAIN Figure 7-7 Example 4.

ICONS	Ch07 Series-Parallel Circuits
	TRAINER TASK: BUILD SERIES-PARALLEL CIRCUITS IN FIGURES 7-6 & 7-7
	LAB TIME 4: COMPLETE SERIES-PARALLEL CIRCUIT WORKSHEETS 1, 2, & 3 TASK SHEET ON ELECTRICAL CIRCUITS
	21. SLIDES 21-22 EXPLAIN SUMMARY
	23. SLIDES 23-30 DISCUSS CHAPTER QUIZ ANSWERS
	<u>HOMEWORK: SEARCH INTERNET HAVE STUDENTS USE INTERNET TO RESEARCH WIRING DIAGRAMS. ASK THEM TO DOWNLOAD AT LEAST 2 WIRING DIAGRAMS TO COMPARE AND CONTRAST. ASK STUDENTS TO SHARE THEIR FINDINGS WITH THE CLASS.</u>