Welcome To
C&C Associates

Home Study Course
Digital and Electronic Film
Camera Repair

CMOS Spacers
(1) 0.107mm
(2) 0.090mm
(3) 0.043mm
What this field has to offer you!

• **Independence.** A trait common in this field is our independent nature. Whether we work for ourselves or others, we all share an independent streak. One of the most attractive things about this field is that it allows us the ability to control our time, economics and working conditions.

• **Income.** Income range between $35,000 - $60,000; with a high end of $80,000 plus (40% - 50% of gross billing). Incomes for technicians who own their business can be higher or lower depending on individual ability. When you need extra money, you can just grab another camera off the shelf.

• **Security.** This is a skilled field and technicians have always been in short supply. Most camera technicians find that they are the only ones in their area. Even in large cities there is little competition. Your job or business starts with a high wall and as your skill and experience grows so does that wall. You won’t be put out of business by a chain store moving next door or find your job sent out of country. We can make our own economic security.

• **Home Business.** For many a real home business is the goal. In this field a home business is not only possible but it’s the most common type of business. Whether a home business is your goal or a stepping stone; the low overhead, flex time and minimum space requirements make this field ideal.

• **Retail Business.** Rick Green started Green’s Camera Tech as a home business over twenty years ago. In just a few short years, it grew into a retail business. Several years ago he sent me pictures of his location, a new million dollar multi-technician shop. The most inspiring part of this story is that Rick is a disabled person who overcame obstacles and achieved his goals. The last picture with his wife and family tells the best story.

• **Net Business.** The web is opening a new range of opportunities for independent businesses. Work can come to you from all areas of the country and even out of the country.

• **Combine Business Types.** Mix and match to suit. Diversification is the best key to your security.

• **Opportunity.** Everybody has an equal opportunity; men and women, engineer or high school graduate, people just starting out or those getting ready for retirement. People enter this field from all walks of life seeking an independent lifestyle with a good income that relates to their interests and hobbies.

**THIS FIELD CAN BE A GREAT OPPORTUNITY FOR YOU!**
What we have to offer!

• **Our course is up-to-date.** We are in touch with professional repair shops and manufactures daily. For over 25 years we have been publishing repair articles, business newsletters and teaching workshops. Our work is our own, unique and gives us the resource we need to update each lesson as needed. **We know this field and the business of this field!**

• **Digital Training.** We’re there! Our course includes digital information starting at Lesson 1. This is a ‘must know’ and expanding area. We know how digital cameras work and how to repair them. Through our workshops we have trained professional technicians from around the world. We taught the first General Digital Repair and first Digital Single Lens Reflex Repair workshop in the world. The standing ovation we received from professional technicians is their endorsement that our knowledge and training works.

• **Electronic Film Training.** Film camera repairs range between 40% to 60% of current volume. These percentages will shift over time but there is a large residual volume of film camera repairs which will continue for years to come. The power, lens, exposure, metering, Autofocus, flash, body designs and layouts are the same or similar to film cameras. This means that training on film cameras will shorten your training on digital cameras. In the ‘digital only’ lessons, we concentrate on systems unique to digital cameras.

• **Hands On Training.** You will use an extensive amount of equipment, breadboards and cameras with your lessons. You need hands on experience and we give it to you. These cameras are expensive so to keep costs low, we send them at no additional charge. Our only condition is that you agree to return the labs and provide a credit card number to secure our risk.

• **Individualized Help.** You will have questions .... and we encourage them. Through our email and 800 phone number, we help you. Because of our teaching experience, we have answered an incredible number of questions. We don’t use stock answers but personalize them in a way that stimulates your growth. We have the experience and background to help.

• **An Ethical Business Standard.** There are no long term contracts, hidden obligations or small print to worry about. It’s not complicated, you pay as you go In addition, we have had a hand shake business with most of the people in this field for over 25 years. Our reputation is gold!

• **Real Life Resources.** Our resources are your resources. We actively participate in the repair world and are involved with professional camera repair shops and manufactures around the world daily. No other course in any field has our level of interaction with the real world.

• **Teaching Credentials.** Chuck Bertone has a Washington State College Certificate 1977 - 2003. He was the program developer and instructor of the world famed Photo Technology Program until his retirement in 2000. He was the only college certified camera repair instructor in the USA. He has the credentials and teaching experience in this field. He is the person who will answer all your questions.

• **Support after Graduation.** We offer continuous training, technical and business help, membership in a professional society, workshops, ongoing repair publications, a world wide email network, a web library, repair data base newsletters, a great business network and more.

**We can help you make this a income producing profession!**
Charles Claar, Board of Director.

His community college administrative experience makes him ideally suited for directing student affairs and giving careful attention to every detail of this program.

Professional Credits

Winner of the Zimmerman award, Associate Dean of Continuing Education at Geesse Community College in New York, Graduated from Southern Illinois University, Masters degree from State University College at Buffalo.

Phil Zimmerman, Board of Director

With over 30 years in the photo repair industry. He brings his experience and knowledge to this home study program. His engineering background and hands on, down to earth approach combines technical experience with real life solutions. A true icon in this field.

Professional Credits

Co-Author of this course, winner of the Zimmerman Award, winner of the Thomas Le Crouix Award, owner of ZTS Inc., designer of the first Autofocus Tester, designer of only accurate Lithium Battery Tester, Honoree Lifetime Member of The Society of Photo Technologists, Former President of the Society of Photo-Technologists.

Chuck Bertone, Course Instructor

A college instructor with an extensive background in photography and 23 years of teaching camera repair. He brings to this course vast experience working with students.

Professional Credits

Co-Author of this course, Instructor and Developer of the Internationally recognized Photo Technology Program, winner of numerous ‘Teaching Awards’, author of C&C Troubleshooting Guides, author and publisher of the SPT Journals, Executive Director of the Society of Photo-Technologists, SPT Chapter President, SPT Board Member, SPT International President.

Notes

Zimmerman Award. This prestigious award from the Society of Photo-Technologists was named for Mr. Zimmerman to honor him for his outstanding contributions to this field. Thomas Le Crouix Award. This award is presented for outstanding lifetime technical contributions to the photographic industry by NAPET. ZTS Inc. This company is known for its innovations and break through technology in camera and battery test equipment. C&C Guides. These repair guides are considered the finest publication available in this field with an international following. C&C has also produced troubleshooting guides and videos for manufacturers such as Canon Inc., Minolta Inc., Ricoh Inc., and Fuji Inc. Society of Photo-Technologists. The largest professional international organization of camera repair shops, technicians and manufactures in the world.
About the Course

• The course consists of **19 Lessons**. Lesson cost **$190.40** each ($180 + 10.40 S&H).

• Information about **Digital Cameras** **starts at Lesson 1** and continues through out the course.

• The course includes **Analog and Digital Electronics Lessons** to give you a strong foundation. You don’t need to have an electronics background to start the course.

• Lessons 1-4 gives you basic skills; external checks, soldering, analog and digital electronics. Lessons 4-8 explains how the systems that make up both digital and film cameras work; power, lightmeter, Autofocus and release. Lessons 9-10 teaches you how to disassemble and reassemble Zoom Compact and Single Lens Reflex Cameras. Lesson 11 is about exposure control for both film and digital cameras. Lesson 12 teaches you about flash circuits and the TTL difference between film and digital cameras. Lesson 13 explains how film transport systems work. Lessons 14-15 teaches you to disassemble and reassemble lens and shutters. Lesson 16 teaches important skills for troubleshooting cameras. Lessons 17-19 relates directly to repairing Digital Compact and Single Lens Reflex cameras.

• During the course you will have **hands on experience** with: externally camera checks, soldering components on a Flexible Circuit, Analog and Digital Electronic experiments, testing DC/DC Converters, testing lightmeter circuits, reading Autofocus codes, testing SLR release systems, disassembling & repairing P/S Zoom Cameras, disassembling & repairing SLR Cameras, testing Flash circuits, testing Film transport systems, disassembling & repairing lens, disassembling & repairing focal plane shutters, disassembling & repairing Digital Cameras.

• There are **eight videos** to give you step by step instruction. These custom videotapes will allow you to ‘see’ each step in detail so you will have a clear understanding of what you are supposed to do. As you gain experience, you will also be required to use **repair manuals and CDs** as part of the lesson experiment.

• There is a selection of **tools** which **comes with the course** and are yours to keep.

• After you complete Lesson 10, you can attend our **workshop**. This is **optional** and is given during the Photo Marketing Convention once a year. You will need to contact us for details for that year.

• We offer **800 phone and email help line**. Support **continues after graduation**. We give you one on one help, not canned answers. Our objective is to help you to understand.

• When you graduate you will receive a **graduation certificate**. Our certificate is known and recognized throughout the industry.

• In addition after you graduate you will receive a **free one year membership** to the Society of Photo-Technologists.
Lesson 1

Camera Operation & Design
Definition of camera
Modern Camera Categories
Viewing and Focusing Systems
Lenses
Shutters
Light Meters Methods
Exposure Control
Displays
Electronic Flash
Film Transport
Digital Image Storage
Recording the Image
Digital Imaging
Cleaning CCDs
The Low Pass Filter
Digital Infrared Conversions

Hands On Lab
SLR Camera, external tests .. optional

Training DVD
Introduction to Film and Cameras

Lesson 2

Soldering Techniques and Tools
Basic Soldering Techniques
Tools
Magnifiers & Parts Tray
Manuals
Tools after Graduation
Update to Tools
Oscilloscopes in 30 minutes
Digital White Lightboxes
Digital Focus Tools
Depth of Focus Jig
Optical Bench
Other Cool Tools
Micro Brushes
CF Straightening Tool
Digital Veneer Caliper

Hands On Lab
Flex circuit for soldering
10 Ω, 1KΩ, Flash Discharge resistors
Tool Kit for the course

Training DVD
Soldering

Lesson 3

Analog Electronics Circuits
Electricity
Analogies
The Components
Semiconductors
Transistors
Integrated Circuits
Operational Amplifiers
Comparators
Analog Electronics in Digital Cameras
MD FPC
Flash PCB
DC/DC Converter
Fuses

Hands On Lab
Analog Breadboard
(transistors, lightmeter op amp circuits)

Training DVD
Using Camera Test Equipment

Lesson 4

Digital Electronic Circuits
Binary Systems
Transistors and Binary Codes
Binary Numbers
Binary Coded Decimals
Binary Arithmetic
Digital Building Blocks
Gates
Truth Tables
Logic Networks
The Clock
Binary Adders
Combinational & Sequential Logic
Encoders
Multiplexers
Memory Registers
Processors
Some History
Why They Work
Communication
Loose Ends
Code Generators
Position Counts
Displays
Shutter Speed Control
Practical Notes on Logic
Hands On Lab
Digital Breadboard

If you have a strong background lessons 1-4 may be challenged. We will send you the unit tests for $20. If you pass the tests you may be able to skip that lesson.

Lesson 5
Power Supply Systems
- Batteries Types and Applications
- Batteries for Digital Cameras
- Secondary Power Systems
  - Power Latches
  - Switching Transistors
  - Battery Check Circuit
  - Voltage Regulators
  - Clocks
- Back Up Systems
  - Backup Batteries
  - Backup Capacitors
- DC/DC Converters
  - DC/DC Converters in Digital Cameras
- DC/DC Converter Troubleshooting
- Troubleshooting Digital DC/DC Converters
- DC Power Supplies for Troubleshooting
  - Using Power Supplies
  - Measuring Current Consumption
  - Open Circuits

Hands On Lab
SLR Camera, test a DC/DC power circuit

Training DVD
Electronic Camera Systems

Lesson 6
Camera Metering Circuits
- Digital Cameras
- Digital Electronics / Digital Cameras
- Measuring Light
  - Photovoltaic Cells
  - CdS Cells
  - Photodiodes
  - Matrix Cells
  - Photodector Locations
  - Lens Shutter Compact Cameras
- Troubleshooting and Testing Photodetectors
  - Testing CdS cells
  - Testing Photodiodes

Hands On Lab
SLR Camera, test the Lightmeter Circuit

Lesson 7
Release System
- Logic of Release
  - Comparing Film & Digital Models
- Film P/S Release Systems
- Digital P/S Release Systems
- Film SLR Release Systems
- Digital SLR Release Systems
- Troubleshooting & Repair
  - Film and Digital P/S Release Problems
  - SLR Release Problems
  - Motor Driven Film & Digital SLRs

Hands On Lab
SLR Camera, test the electronic release

Lesson 8
Servicing SLR Lens
- Lens Service
  - Glass and Coatings
  - Diaphragms
  - Focus Mounts
  - Lubrication
  - Adjustments
- Focal Length and Maximum Aperture
- Service
  - Servicing Autofocus Lens
    - Disassembly / Reassembly
Lesson 9
Autofocus Systems
Point & Shoot Autofocus
How Rangefinder Work
AF Rangefinders
P/S AF Lens Mounts
Focus Zones
Autofocus & Flash
Troubleshooting
SLR Autofocus
History
Systems
Highlights
Interfaces
Troubleshooting
Common AF Malfunctions
Testing and Adjusting AF SLR Cameras
I3A/ISO Resolution Chart
Testing Digital Focus
Testing Parameters
Focus System
Sensor
Screen
Autofocus
Tools
Aligning the Camera with the Focus Plane
Fuji Test Station
Check for a Flat Plane of Focus
Check the Degree of Focus / Focus Shift
Checking the Mirror and Sub Mirror
Checking Image Sensor Resolution
Measuring Lens Flange Focal Distance

Lesson 10
Servicing Lens Shutter Zoom Cameras
Getting Started
Hands On Experience:
Disassembly / Reassembly
Using Repair Information
Soldering
General Techniques

Hands On Lab
Lens Shutter Camera, zoom tube disassembly
(digital / film P/S relationship)

Training DVD
DVD, CD, or Service Manual

Lesson 11
Servicing Single Lens Reflex Cameras
Getting Started
Hands On Experience:
Disassembly / Reassembly
Using Repair Information
Soldering
General Techniques

Hands On Lab
SLR Camera, disassembly
(digital / film SLR relationship)

Training DVD
DVD, CD, or Service Manual

Lesson 12
Exposure Control Systems
Mechanical Exposure Control
Electronic Exposure Control
Electronic Timing Circuits
Lens Shutter Exposure Control
Programmed Lens Shutters
Integration
Troubleshooting Analog Shutter Circuits
Digital Lens Shutter Control
  Binary Comparators
  Shutter Control
  Stepping Motor Control
  Memory
  Troubleshooting Digital P/S Circuits
  Other Shutter Drivers
SLR Exposure Control
  Analog Exposure Control
  Electronic Memory Switches
  Digital Memories
  Troubleshooting SLR Memories
Electronic Aperture Control
  Interface and Feedback for Aperture
  Aperture Control Interfaces
  Summary
Troubleshooting Automatic Apertures
  Aperture Troubleshooting Table
SLR Electronic Shutter Control
  Types of Focal Plane Shutters
  Troubleshooting Focal Plane Shutters
Exposure Control for Digital Cameras
  ISO
  Digital P/S Exposure Control
  Digital Exposure Control
  Diaphragms
  Shutter
    CCD Image Sensors
    CMOS Image Sensors

Hands On Lab
  Camera Modules, exposure systems

Lesson 13
Servicing Shutters
  Lens Shutters
    Exposure Time
    Multi-Blade Shutters
  Lens Shutter Speed Control
    Program Shutters
    Other Program Shutters
  Lens Shutter Troubleshooting and Service
  Lens Shutter Service
    Cleaning
  Focal Plane Shutters
    Focal Plane Shutter Design
    Focal Plane Speed Control
    Focal Plane Flash Sync
    Other Speed Controls
  Electronic Speed Control
    Curtain Travel Times
  Vertical Shutter
  Horizontal vs. Vertical Shutters
  Troubleshooting Film Focal Plane Shutters
  Shutter Speed Table
  Typical Curtain Travel Times
  Shutters in Digital Cameras
    CCD vs. CMOS Imagers
  Troubleshooting Digital Camera Shutters

Hands On Lab
  Disassemble / Repair a Vertical Shutter

Lesson 14
In Camera Electronic Flash Systems
  Light Spectrum
  Xenon lamps
  DC / DC Converters
  Automatic Charging Control
  SCR Triggering
  Flash Exposure Control
  Automatic Flash Exposure Control
  Automatic Aperture Control for Flash
  SLR Flash Aperture Control
  Autofocus SLR Flash Dedication
  Adjustment
  Troubleshooting
    Tool and Techniques
    Solving Problems
  Test, Techniques and Common Problems
    Flash Synchronization
    Accessory Flash Units
    Camera Sync Circuits
  Flash and Digital Cameras
    White Balance, the one difference
  Summary

Hands On Lab
  Test Disposable Camera Flash System
    Flash Modules, flash systems

Lesson 15
Film Transport & Image Storage
  Film Wind Cycle
  Film Transport Interlocks
    Blank Shot Prevention
    Double Exposure Prevention
  Film Transport
    Film Drive
    Film Metering and Storage
    Counting Exposed Film
Rewinding Exposed Film
Manual Drives
Motor Drives
  External Motors
  Internal Motors
Motor Control
  Motor Basics
  Motor Control and Electronic Switches
Transport Motor Functions
  Rewind
  Auto Loading and 1st Frame Advance
Film Metering
  Single Frame Advance
  Take Up Spool
  Sprocket and Film Metering Roller
  Mechanical Film Metering
  Electronic Film Metering
120 / 220 Film Metering
  Film Metering Roller
Counting Exposed Frames
  Mechanical Exposure Counters
  Electronic Exposure Counters
Rewind
  35mm Rewind Methods
    Rewind Fork
    Manual Rewind
    Power Rewind
    Automatic Power Rewind
Time Out
  CAS Frame Count
  APS systems
Transport Motor Drive Examples
Troubleshooting Film Transport
Digital Image Storage
  Introduction
  Image Storage
  Memory Card Problems

Hands On Lab
  SLR Camera, test film transport

Training DVD
  DVD, CD, or Service Manual

Lesson 16
Troubleshooting Digital & Electronic Film Cameras
  Troubleshooting Sequence
  Defining and Testing Components
    Resistors
    Fuses
    CdS Cells
    Variable Resistors and Potentiometers
    Diodes

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    Resistors
    Fuses
    CdS Cells
    Variable Resistors and Potentiometers
    Diodes

Zeneer Diodes
  Photodiodes
  Bipolar Transistors
  Capacitors
  Magnets
  Hybrid Magnets
  Integrated Circuits

Locating causes of Battery Drain
Troubleshooting and Repair Defined by Era
  Mechanical Era
  Electronic Manual Focus SLRs
  Autofocus SLRs
  Digital Cameras

Troubleshooting
  External Tests First
  Disassembly and Repair Next
  Locate the Source
  Do the Repair
  Test after the Repair

The Secret of Switches
Repairs using an Oscilloscope
  Troubleshooting a Canon D30
  Troubleshooting a Canon Digital Rebel / 300D

  Doing a Sneak and Peak! Getting Fancy
    Flash TTL problem with a Canon D30
    Flash test on a Nikon D70

Making $
Troubleshooting Flowcharts
  Power
  Flash
  Exposure Control
  Motor Control
  Typical Autofocus System
  Typical Rangefinder Autofocus
Digital Camera Flowchart
  Power
  Lightmeter
  Image
  Flash
  Release / Shutter / Diaphragm
  Autofocus

Training DVD
  Troubleshooting
Lesson 17
Troubleshooting and Repairing Digital P/S Cameras
Troubleshooting Digital P/S Cameras
Existing Problems
Introduced Problems
General Strategy
Tips
Static .. hidden enemy!
True Stories
What Techs know about Digital P/S Repair
Typical Repairs
Zoom Lens Failures
Dead Cameras
Memory Card Unit Failures
Flash Failures

Hands On Lab
Digital P/S Camera, troubleshoot & repair

Training DVD
DVD, CD, or Service Manual

Lesson 18
Troubleshooting and Repairing SLR Cameras
Troubleshooting SLR Cameras
Existing Problems
Introduced Problems
General Strategy
Tips
Static .. hidden enemy!
True Stories
What Techs know about Digital P/S Repair
Typical Repairs
Dead Cameras
Short Battery Life
Lightmeter Problems
Autofocus Problems
Release Problems
Diaphragm Failures
Shutter Failures
Flash Failures
Film Transport Failures

Hands On Lab
SLR Camera, troubleshoot & repair

Training DVD
DVD, CD, or Service Manual

Lesson 19
‘Digital SLR Repair’
‘The Business of Camera Repair’
(This is a double Lesson, at no extra charge)

Digital SLR Repair
Digital SLR Systems
Power
  Batteries
  DC/DC Converter
Logic
  Repairs
Lightmeter
  Repairs
Autofocus
  Repairs
Release
  Repairs
  Logic is about switches
Diaphragm
  Repairs
Shutter
  Repairs
Image Sensors
  Repairs
TFT LCD
  Repairs
Flash
Image System
  Image Compression Board
  Image Sensor
  TFT Driver Board
  TFT LCD
  Memory Unit
More Cleaning Image CCD Tips
Quick Tips
Tools
Testing
Charges
Stereo Microscopes
File Formats
  The simple story
  JPEG
  RAW / NEF
  EXIF
  TIFF
  DCS
A word about File Sizes
Computer Files
  GIF
  PICT
  EPS
  FPX, Photo CD, APS
Transferring the Image
Port Type / Cable
Drivers
Graphic Software
Transfer Problems
File Resolution
Printing
  Scanning
  Printing Methods
  Color Inkjet
  Laser
  Dye Sublimation
  Light Jet
  Photo Lab
Digital Color Management Tips
Digital Calibration
  White Balance and Color
Test Equipment
  Test Cards
  Test Readers
  Software
  Computer
  Test Charts
  Test Equipment
Adjustments
  Most repairs do not require adjustments
Adjusting the Canon G1 Digital Camera
  Color Calibration
  Flash Calibration
  Lr 12 Calibration
  Autofocus Calibration
  CCD Image Calibration
  LCD Calibration
  TTL Calibration
Digital SLR Disassembly
  Body Design
  Lead Free Solder
  FPC Connectors
  Lens Flange Focal Distance
Troubleshooting Digital SLR Cameras
  General Strategy
  Important Tips
What Techs know about Digital SLR Repair
  Typical Repairs
  Shutter Failures
  Dead Cameras
  Memory Card Unit Failures
  Release Failures
  Flash Failures

Hands On Lab
SLR Camera, optional *
* addition charge

Training DVD
C&C and SPT CDs on Digital SLRs

The Camera Repair Business
The Industry Today
  Repairs Then and Now
  Repairs Changed
  Electronics Create Changes
  Repair Dollars
  Brands
  What Do They Shoot
  Digital SLR Sales are Hot
  Where You Fit In
  Nice Trends
  Emerging Repair Market
The Shop
  Retail Location
  Home Office
  Inside Your Shop
    The Chair
    The Workbench
    Floor Coverings
    Storage
    Computer Station
    Lighting
    Test Equipment
Tools & Equipment
  The Love of Tools
  Tools for Camera Service
    Absolutely Necessary
  Take our Advise
  Tools for Digital Cameras
Getting Started
  What Do You Want to Fix
  A Common Mistake
  A Warning
  Specializing
  Pro vs. Amateurs
  Types of Professional Clients
  Becoming a Warranty Station
  Pricing and Income
  What Else Can You Fix
  Minimum Charge
  Evolving Business Models
Knowing What to Fix
  Repair Life
  Age & Use
  Keeping Current
  Geographic Problems
  Production Lot Problems
When to Ship it Back
Bailouts
Water Damage

Parts
  Important Tips
  What You Should Stock
  How to Start Ordering Parts
  Ordering Tips
  When to Order
  Storage & Organization
  Buy a Body
  Costing your Parts
  Making a Part
  One Last Word

The Business of Business
  What’s In a Name
  Forms and Other Paperwork
  Keeping Your Books
  Setting Up Your Books
  Payroll
  Paying Bills
  Licenses
  Initial Investment
  Getting to Know your Banker
  Money Going Out
  Going After Business
  Billing
  Pick Up and Delivery
  Your Warranty
  Re-Repairs
  FAX Machines
  Email
  Web Pages
  Computers and your Business

The Day to Day
  Shop Hours
  Your Personal Schedule
  Telephone & Email
  How to Fall Asleep at your Bench
  Exercise
  At the Bench
  Time Off
  Your Shipping Department

Customer Relations
  Things the Cause Hard Feelings
  Fighting Over Warranty
  Long Repair Times
  Changing Estimates
  Confidence with Customers
  Leaving the Customer Feeling Good
  Advice for the Shy Person

The Hostile Customer
  Summing it Up

Getting Bigger
  Hiring a Counter Person
  SOP
  Hiring another Tech
  What it costs to Hire Someone
  Intangible Costs
  Can You Manage
  Should You Incorporate
  Retirement Plans
  Extra Money Makers
  OSHA

Shop Lore
  Adhesives
  Solvents and Cleaners
  Lubricants
  Solders and Soldering Aids
  Electronic Components
  Tips and Tricks
  Liquid Damage
  Ways to Lose Money
  Ways to Make Money
  Sources

Overall Business Strategy
  The Business of Business
  Marketing
  Advertising
  Super Size
  Evolve your Business Model
  Know what sells Repairs
  Offer New Services
  Get Excited and start shooting Digital
  Offer Training
  Business Spotlight
    Camera Doctor
Questions & Answers

How long does the course take?
Each lesson is different, each person is different so we can’t just make a general statement. However, we have had people complete our course in as quick as six months while other spread it out over two years. The average time seems to be about one year.

Are there women in the course? How about in the field?
We always have a number of women in our course. And over the years we have trained our fair share. There are also a number of women technicians in this field, rightfully so. We don’t know of any barrier, invisible or otherwise. The only thing that matters in this field is .... repairing cameras.

Can you really learn through a correspondence course?
Yes! As a matter of fact, the vast majority of technicians in this field came in through a correspondence course and that includes National Service Managers for major camera companies. Fact is that correspondence is about the only way to get into this field. There are certainly drawbacks to not attending a residency program. But on the plus side, correspondence allows you to study at your own time and in your own home.

Another point to consider; there never has been a better Camera Repair Correspondence Course, there has never been more hands on labs, with our 800 phone and email there never has been better support and there never has been a more qualified instructor.

Can’t I just study Digital?
Well ..... think of it this way, why not also study electronic film cameras. You need to learn all the same systems anyway. Digital cameras are film cameras ... minus film transport / plus digital image sensor! The Nikon N80 film camera is the Fuji S2 and Nikon D100 digital camera! We know .. we wrote the manuals.

On the practical side; film cameras still make up 40%-60% of repair volume in any shop.

I need an income?
That’s pretty much the thrust of the program. Making money by repairing cameras. Full time income, part time income, supplement to retirement income or a change of careers because you need to or just plain want to; these are common stories for students talking our course.

Can I really make money at home?
Yes! A home business is the most common and successful business in this field. It’s also the most common goal of people who goes through our course. It’s been like that for as we’ve known it, 30 years or more. The business world is finally catching up with us. It’s the low overhead, small working area and the size of cameras that makes it possible. Your skill, knowledge and experience is your major asset.

Don’t get us wrong, it is a business. Which means that you have to be disciplined, keep regular hours, communicate with customers, make decisions, repair cameras, promote your business .... you know ... work. But for those that enjoy this as we do, the rewards and self-empowerment are well worth the effort.
Does this course qualify for State or Federal programs?

Depends! We used to do a lot of this in both the USA and Canada. But over the years more and more bureaucracy has been added and many times it's just more work then we can afford as a small company. For your benefit we will still try to do this on an individual basis. What you need to do is check with your program and then put us in touch counselor. Usually what we are talking about is company, state or federal work retraining or rehabilitation programs.

How am I graded?

Each lesson includes a project or test that will be graded by our staff. If you score below 70 on any lesson, you will be required to repeat the project or test. You may not repeat a lesson more than three times. After three failures on a lesson, the student’s latest score is recorded. The student is consulted and withdrawn from the course. After one year from termination, the student may reapply for admission. A minimum of 1400 points is required to graduate.

What happens when I graduate?

After you successfully complete our course, you’ll be issued a certificate stating that all requirements have been met of graduation from the C&C Associates’ Home Study Training for Electronic Camera Repair. At your request, we will be happy to furnish any prospective employer with proof of graduation.

What are the real prospects for this field?

“I did a search and found the following: Employment of camera and photographic equipment repairers is expected to decline [2002-2012]. The popularity of inexpensive cameras adversely affects employment in this occupation, as most point-and-shoot cameras are cheaper to replace than repair.”

We have seen these types of projections for more then twenty years, written by people who don’t understand the camera repair field and don’t investigate. I know because the college I taught at insisted on accountability. We not only had to be helping people but we had to prove it and our results were scored against other fields. Camera Repair always scored high in job placement, income and business ownership.

Our success isn’t magic but based on supply and demand .... there are more cameras waiting for repairs then there are techs to do them, 2-6 week waiting lists are common. And this is twenty plus years into the time of cheap cameras. Cheap cameras is the sales base. The larger the base, the higher the sales volume of more expensive units. In 2004 Nikon increased D70 production from 70,000 to 90,000 per month; Digital Rebel sales are through the roof.
What about the future?
We are undergoing our fifth technological revolution; mechanical to electronic to Autofocus to Point & Shoot and now to Digital. Each change caused a lag in older style repairs followed by boom in newer repairs. Each revolution resulted in significantly higher camera sales. After a time older repairs also increased but had a diminishing base spread over twenty years. A number older technicians not interested in changing retired.

Digital is following the same trend ... with benefits. Digital cameras cost about 2-3 times more then a comparable film model, sales are smoking, repair charges are increasing while repair times are down, lag time between purchase and repair is far shorter because of higher use, resistance to repair prices is also down due to saving in film and processing.

“A new customer recently brought me two Nikon F-90 bodies. Estimate each $150 plus parts. She was hesitant about the repair, even though I explained she was getting a deal. Total repair time about 2 hours for both.

The same customer returned later with two Fuji S1 (Nikon D1) bodies. Estimate $350 each plus parts, both had sequence gear problems. The customer was much more enthusiastic about the price, especially after I mentioned Nikon’s flat rate. Total repair time, including time used to take some photos for my notes was about 2 hours for both.

So, $300 or $700, for very similar cameras. The customer tells me she is planning to buy more Digital SLR bodies... “I save almost $1000 every 6 months in processing costs, because I shoot a lot of weddings... more clients want digitally mastered albums... and I charge more for the digital albums”

This year my approvals for consumer digital models have been down. I blame this on a couple of factors, one being the high cost of parts. For example the lens assembly on a Sony DSC-P73 lists for about $175, and the camera sells for around $400. Approvals on Mini-DV camcorders continue to be strong in my shop, despite retail price drops.”

“Replacing the I Substrate. First job took about one hour. The next shouldn’t take any more then 30 or 40 minutes. I’d love to do these by the dozen. Got $538.00 plus tax”.

We hope that this Q&A will be a real help to you.
If you have other questions or want more details just contact us.
Camera Repair Businesses

Camera Doctor

Starting Out
Alan Mais started in the camera repair field at the beginning of 2001. He began with the C&C Associates Electronic Film and Digital Camera Repair Course. His background was in management with no repair experience. After a few lessons, his studies were interrupted by deployment in the military. Although he never completed the C&C Course he returned as a Student Member of SPT in 2002, upgraded to a Class A member in 2003 and upgraded again to Class B membership in 2005; indicating steady growth. Alan is also a regular attendee of our C&C / SPT workshops each year.

Growth / The Bottom Line
Camera Doctor has experienced steady growth with a 30% growth in 2004 and a similar or higher growth shaping up for 2005. As a reference; growth of 5% or 6% for a business is considered good to very good, a corporate pay increase of 4% is considered very good. Alan attributes his business growth to three things; using big box retailers as a referral, conducting clinics, teaching operational use camera classes.

Marketing
How do you promote your business? “We advertise in church bulletins, specialty publications, some newspaper. Even though we have not been able to track it percentage wise, I’d say we have a very strong response in repeat and new business with stickers we place in the camera’s serviced (including wholesale pieces) and in the free humorous pens we include with every repair exceeding $100.00.”

“I attribute a strong percentage of my increase to the big box retailers such as Wal-Mart, Walgreen’s, and Sams. This percentage is going to increase this year as many Super Centers are being built with in a 100 miles of me. I’ve found that by asking my customers where they have their pictures printed or where they purchased their camera gives me an in. An into approach the business with the customer in front of me. Once I’ve found out where they do their photo business I ask them to do me a favor. If they are pleased with my service would they recommend me to this store. I ask this as I hand them a couple of business cards. I keep track of who the stores are (geographic location is necessary). Once I start to receive some referrals from the store I will personally visit the store and introduce myself and give them a stack of cards. I generally will receive unsolicited requests from the store when their supply of my cards are running low. I never mail the cards if I can find a way to meet face to face and hand the cards in person. I go through so many cards that my wife schedules at least once a month a printing session of just business cards. Being a friend is what business growth is all about; it works for me anyway.”

Business Mix
Their business is a mixture of wholesale and retail. 79% of their business is retail with a mix of walk in and mail in, 21% of their business is wholesale. Right now the repair splits evenly between film and digital but Alan expects to see a ratio of 65% digital by the end of the year.

On the digital end the overwhelming number are D P/S. He has only seen six D SLR this year but the number of inquires is increasing. “I think that once the word is out that I can repair these and the volume of units sold increases then they will be greater in quantity. Especially with the problems of dust on sensor as most Nebraskan’s are outdoor shooters.”

Wholesale Business
How were you able to keep your dealers intact? “Three ways:
a. I visit them every three months just to say hi and also help answer any questions they may have on camera’s on their shelves. I spend time meeting all their sales personnel and get to know them personally.
b. I conduct camera clinics at their facility on a two consecutive day basis. On cameras that are not repairable I personally get behind the counter and try to move their client into purchasing a camera from the selection available.

c. I conduct operational use camera classes every three month’s at the store. Employee’s are allowed in free and encouraged to attend.”

One of the things we noticed is that Alan moved his business where the cameras are. Not by physical location, but by moving his business model. When you repair cameras you need to be where they sell cameras, process images and with those who enjoy and use photography. Big box retailers (Best Buy, etc.) are now the one number sellers of cameras in the US. When Camera Doctor finds a common customer, a connection, they follow the food chain back to their photo sources using that customer as an ice breaker. Then they stimulate their sources business, reaping benefits for both. …

www.cameradr.com

Underwater Photo-Tech

Starting Out

After graduating National Camera in 1981, Fred Dion began his camera repair career working for Sanford Camera & Projector Repair. By 1985 his desire to start his own business and his interest in underwater photography combined so he started Underwater Photo-Tech.

Starting a camera repair shop aimed at a very small niche market is no small feat. And Derry, New Hampshire (40 miles north of Boston), isn’t the center of the diving world. In fact, when he started there was only one other underwater camera repair shop in the USA and that was in Texas.

Like most of us, his was a bootstrap startup and the next three years was a juggling act ... sweat equity. Build necessary test equipment where he could including his own depth test chamber, buying tools and equipment as he needed, building a customer base, working construction to meet the bills. Finally after three years, Underwater Photo-Tech became a full time business.

Marketing

Fred Dion started with a small, inexpensive classified ad in a national dive trade newspaper and by attending local Dive Shows. After some trial and error, he now advertises exclusively in Dive magazines, all of them. He also expanded the Dive Shows he attends, gradually expanding outward so that now he covers the national Dive Shows.

He keeps his business marketing up-to-date. Yes, Underwater Photo-Tech has both a store front and on-line store.

Has this marketing strategy worked. I’d say so! His business has doubled in size every year since he started. Underwater Phot-Tech has grown from a one person 200 square foot facility to a nine employee 2000 square foot enterprise, half of which is devoted to repair.

A Customer Driven Business

Fred believes in maximizing repair income by checking to see if the customer needs lens caps, batteries, film, etc. It’s added value to his repair and customers love the service. He understands his customers goal; taking pictures.

In 1989 Under Photo-tech introduced the Body Cap for Nikonos® because of customer demand. Since then the line of custom accessories has grown to over twenty. They range from lens caps to remote control shark units. All through customer demand.
His repair customers also developed the sales end of his business by asking for equipment, lens, cameras, flashes etc. He didn’t see the profit in offering equipment available through normal dive shops. Competing with businesses that were feeders for his repair facility. He saw his market in high end equipment which wasn’t commonly available. Nice move, dive shops can refer both repairs and high end customers to Underwater Photo-Tech without conflict. To give you some idea, a underwater housing for a D1 camera can run upwards of $5,000 ... without camera.

Of course not everybody, is ready, able or interested in such a expensive equipment. But they do have the desire to capture their once in a lifetime or infrequent trip. Not to worry, rentals are available. Fred pays attention to his customers.

Building Customers through Education
Early on Fred saw the need to get more people into diving and underwater photography. Diving he left to dive shops, his job was getting them to take more and better underwater pictures. He knows that photography can be a great highly addictive hobby. He just needed to get them started and show the potential. So he started offering classes and also teamed up with the Nikon School of Underwater Photography. To keep up with his customers interests, a new digital section has been added. Fred spends a portion of the year on trips to Bonaire, Grenada, Fiji and Indonesia. Prices for these field trips range from $564 to $4,500. How’s that for a cherry on top.

So How’s Business
In this slow economy, diversification is the key. While sales are off, repairs are up. While moderately priced trips to the Caribbean are slow, more expensive trips to Indonesia are sold out nine months ahead of schedule. Overall Underwater Photo-Tech is doing very well.

Notes. While Underwater camera repair is a very small niche market, there is much we can learn. First and foremost they offer a quality service. Marketing is cumulative, they keep at it. They put their face out there by attending trade shows. They diversify by catering to their customers. They are involved in their customers goal, taking underwater pictures. They educate their customer and have figured a way to make it both a business and a pleasure. Fred Dion started on a shoe string, developed a great life for himself, his family and his employees. And his customers couldn’t be happier.

GR Enterprise Services
Surey, UK
Starting Out

When Graham Rose was at school, he was one of the founding members of the camera club. After leaving school at age 15 (normal in those days in the UK), he applied for work at the famous London Camera Shop ‘Wallace Heaton’ of Bond Street. That was September of 1963.

He received higher than standard wages, first working the counter and then the workshop of the repair department. In those days standards were very high, there was no personal talking during working hours and you had to dress smartly. High standards of workmanship and pride in his work were among the ethics he developed. The clients of the London Camera Shop were the rich and famous including Queen Elizabeth II. Full restorations were their specialty including optical, chrome and paint work. They were also one of the first companies to include modern testing of equipment.

Over the years Graham worked for three different camera repair companies, the last one for 26 years. At the start of 2000 changes in the photographic trade and poor management caused his last employer to go out of business. Finding himself unemployed, Graham first thought of leaving the CR field but many people asked him to carry on with their repairs so he decided to set up his own full time business.
Reinventing Himself

Many small business in the UK are suffering from high overhead, high rent and taxes. Since Graham had been operating a part time business out of his home for many years, he decided to modify his house and work from home. This reduced his overhead and had a number of tax advantages.

Graham is a forward thinking person. He was the first in the UK that imported the ZTS Tester II (our associated tester R&D business) “which is still giving sterling service”. He could also see the digital revolution and even though his customers are still dominantly film he’s in the digital world.

As he developed his contact list, he was asked to undertake different types of repair jobs. One of these was a large local hospital involved in a twenty year research program that used medical photography to document eyes for a diabetes study. Nineteen and one half years into the study the Ricoh based camera and flash equipment had problems. The manufacturers were not the slightest bit interested in helping and the hospital was told to spend about $45,000 ($90,000 US) on new equipment. It wasn’t just the cost. The lack of consistency between the two systems would ruin the nearly complete twenty year project. The hospital asked Graham for help. He repaired the equipment for about $800, the photographic department was delighted, the twenty year project was saved and completed. “My putting myself out to help a desperate situation has been well rewarded by this hospital, they are now my biggest customer in sales”.

<Yes GR Enterprise Service expanded into sales. He could see the defect of big box stores with disposable counter people. Nobody knows what they are doing, not the store and not the consumer. He doesn’t try to compete with box stores, he exploits their major weakness and fills a niche they can’t scratch.>

After the completion of their diabetes study, “the hospital became interested into looking into the digital market and were quite excited when Kodak announced that they were developing a full frame DCS 14n camera. By my doing the research and getting the information, the hospital placed an order for four 14ns and a number of high quality of Nikon lens.” That order that was worth $16,000 ($35,000 US).

That was the start of his interest in Kodak Professional digital cameras and digital photography. It also started GR Enterprise Service into professional sales. Since that time he has sold over 40 Kodak DCS cameras and still gets many requests for second hand models. GR Enterprise Service also deals with Kodak Dye Sub printers, Epson wide body printers, flash equipment and other professional cameras and lens. In addition to sales, they uses a network of associate CR businesses to expand the services they can offer.

Graham Rose starts out primarily as a film camera and photo expert. GR Enterprise Service still repairs loads of medium format cameras as well as other quality and collectable equipment. But doing the research into the digital world for his customer spring boarded him into the digital world. Many of his customers are pro photographers who are purchasing and shooting digital cameras … and they need help. Four years ago he didn’t know digital, but now he’s able to help others and make it part of his business.

The Home Office

“We run our business from home and have invested in building an extension to our 1934 house.

We have the repair shop in the roof with a distant view of London. An additional office for paperwork and accounts. A ground floor extension which is independent from the main home with a separate entrance which acts as the show room, reception and packing area. The garage is used as a machine shop among other things.” On a clear day, Graham has a nice view of London
**Marketing**

“Most of my business is from word of mouth. I try to give real after sales service and quality repairs.” Graham thinks that most of his professional repairs come in by word of mouth while his amateur customers come in from look ups like yellow page ads and web page.

GR Enterprise Service has a web page (www.gres.co.uk). He pays an extra fee so he can be found on Google. A good percentage of the people who find him on the web are local but he also gets many mails IN’s from around the UK.

GR Enterprise Service advertising includes the yellow pages and a similar book called the Thomson Directory which includes On-Line look ups. There is also the National Telephone Directory as well as a service called YELL both of which feature On-Line look ups.

**Digital Camera Classes**

GR Enterprise Service is currently involved with an ex Kodak man developing digital training. Interesting, half a world away and the same solution to the same problem!

**LS Protektor-14n**

_The Firewire Port Protector_

Early on Graham noticed a often expensive defect with the Kodak 14n. The Firewire plug on the camera wasn’t parallel and has slightly rounded ends. As the plug is used the flimsy socket wares causing an intermittent connection. Also the weight of the cable and twisting around while the camera is being used loosens the socket and eventually brakes the Main CCT PCB. As the connection becomes intermittent, frustrated customers start forcing and twisting the plug to get a connection. When the damage happens the socket may have to be replaced, if you are luck. If you are unlucky the Main CCT PCB will have to be replace to the tune of £1,000.

GR Enterprise Service uses a UK manufacture to produce an excellent highly professional product the saves customer a lot of expense down the road. The Firewire Port Protector has been tried and tested. The adapter coverts the 4 pin to a more robust 6 pin Firewire Socket. The specially made cable is sacrificial and is designed to be replace in order to save ware and strain on the camera socket. GR Enterprise Service also make as similar adapter for the Fuji S2 and S3 cameras which have the same problem. ...... www.gres.co.uk
Why C&C Associates was Born

Our Reputation is Golden

The birth of the Canon AE-1 gave birth to the electronic camera age. The confusions and turmoil this created in the camera repair field gave birth to C&C Associates. Our first publication was appropriated titled “C&C Associates Guide: The Canon AE-1”. We did our own reverse engineering, clearly laid out the internal workings of the Integrated Circuits and how to troubleshoot them. We later discovered that Canon had to correct their own internal repair manual due to our publication. This led to our first training seminar for the US Navy who were using Canon AE-1s on their carriers and our first training video “The Canon AE-1 Mirror Box Removal”. It also eventually led to making repair manuals and video’s for Canon, Fuji and others. We are the only outside company ever allowed to do this.

When film Point & Shoot cameras sales started hitting record highs, C&C Associates began to push the idea of repairing them to camera repair shops. We were met with skepticism, who needed more work. So P&S repairs were given to the ‘new’ tech. As shops began to realize that the ‘new’ tech was taking home the biggest paychecks, P&S repair gained respect and we all made lots of money.

Then came Autofocus Single Lens Reflex cameras, the Minolta Maxxum 7000. Manufactures assured us these models required specialized tools and computers ... “not suitable for field repairs”. C&C Associates published the Minolta Maxxum 7000 Repair Guide. We set the Autofocus System with a black dowel (stick) against a white background, to drive the point home! Again we all made money.

For these and many other reasons, C&C Associates was asked to manage our professional association the Society of Photo-Technologists. A world wide organization of manufactures, camera repair shops and technicians.

Even after all this time we still work on Canon AE-1s, AF SLRs, and some film P/Ss. That is twenty plus years from the day the AE-1 started selling. Technological changes diminish older repairs but they sell lots and lots of cameras. We (the people in this field) bought lake houses and put our kids through college on the AE-1 and similar models.

Now comes the Digital Age. And we are writing digital repair articles for the Society of Photo-Technologists as well as the C&C Associates. We gave the first Digital Point & Shoot Workshop to the field and also the first Digital Single Lens Reflex Workshop. And why not. We had the background with our Autofocus Tester which was essentially a high definition digital camera independently produced using GE Engineers.

We go far beyond any correspondence course!

We have the background, know this field, its business and are committed into everybody getting a good deal out of this!
Professional Training  
Followed by Professional After Graduation Support

We assume that you are interested in making money repairing cameras. That means you need both professional training and professional support after graduation. Its two sides of the same coin.

**We offer professional training:**

- We upgrade our lessons continuously. Our course is in real time.

- We answer your questions by email and phone.

- We are experienced. We have trained camera repair technicians for over 25 years. We know what we are doing and how to teach it successfully. Our graduates are scattered throughout the camera repair world.

- We write repair information for professional camera repair technicians and businesses. In nearly every shop in the world, techs reach for C&C Guides first! We bring this back to our course.

- We answer questions professional repair technicians and businesses daily. We bring this back to our course.

- We exchange information with other master technicians around the world. We bring this back to our course.

- C&C Associates is small in size but we have over 330 associate camera repair businesses working with us.

- We know all the players and they know us; Independents, Authorized Repair Facilities and Factory Service Managers.

- We have the honor of being the Executive Director of the Society of Photo-Technologists. The camera repair field knows us and trusts us.

- We are the only company every to produce camera repair guides and videos for Japanese Manufactures; Canon, Fuji, Ricoh.

- We trained camera repair techs for the Navy.

**We offer the following after graduation support:**

- One year free membership in the Society of Photo-Technologist.

- An email technical email service; SPTNET. We link together techs from around the world.

- Industry Newsletters. Real time business and tech tips.

- Advanced Workshops. Once or twice a year, we hold workshop for professional technicians. We certify camera repair shops in different models. And you are invited to join in.

- Manufactured Parts. When the factory can’t provide it, we sponsor independent manufactures to make it. Since 2000 we have poured millions of dollars into repair business using our resources.

- On Line Library. Manuals and Parts lists.

- One on one help.
Testimonials

“Surprised how many ask for camera repair!”
“Last time I think I mentioned about my wife going to San Diego. We got her pics developed and when I went in to pick them up I asked the girl waiting on me if they ever had anyone inquire about camera repairs. This place we take out stuff to get developed is a one hour developing place. Since they don’t sell or handle camera equipment I didn’t think they would get to many people asking about repairs. I was surprised when she told me that they do get quite a few people asking about it. They refer them to a camera store not too far away but that camera store doesn’t repair cameras but sends them out instead.” *Mike*

“A great group of guys!”
Lessons are structured very well and easy to understand. A lot of home study courses require the student to do extra research and additional reading. The video-aided lessons are very valuable. I have had to call C&C Associates a couple times, they were very helpful. A great group of guys! *Jim Bartlett*

“Overall a very Good Course”
The course was very good but very tough especially the electronics portion. The home study course is always much tougher then an instructed course, C&C course was well laid out for the beginner. Overall a very good course. *Brian McNees*

“Thorough and easy to Understand”
Though having my doubts about taking a home study course, I was very impressed with the personal attention given. Every course was thorough and easy to understand(except for Lesson 3). I have 2 lessons left to complete the course, with C&C’s direct help I landed a job at a well-established repair shop. *Benjamin Cach*

“C&C Associates provided the key”
Before I took the C&C Associates camera repair course, I knew very little about cameras. I didn’t even own a camera. But the course taught me from the basics of camera design to their repair to the most complex of repairs. I am now able to troubleshoot and repair cameras. I make a far better living then my last job. The door of opportunity was before me and C&C Associates provided the key to open it. *Todd Wartenbe*

“Step by Step and Practice cameras”
The C&C course allowed me to learn working full time. The step by step videos and practice cameras were an excellent practical introduction to camera repair. *Ryan Bond*

“Home Study Course is an excellent way to enter the field of camera repair”
C & C ‘s Electronic Camera Repair Home Study Course is an excellent way to enter the field of camera repair. Studying at night and on weekends, I finished in just over a year. while I was still working at my job. 5 days after I finished, I had a job as a Camera repair technician. The C&C course enabled me to progress rapidly in my new career. Within 6 months I was making 2 to 3 times my previous salary. I am still repairing cameras 5 years later and the demand for technicians is stronger than ever. I don’t have to worry about the economy because I know there’s plenty of work for me out there. Thanks for the training! *Gordon Ray*
A few graduates!

David Marsh  
**Owner, Apex Photo-Technical Services**  
President, NAPET

Ron Sinnot  
**Owner, Camera C.A.R.E.**

Dale Wynn  
**Camera Service Center**

Ron Kemp  
**Shutter Shack**

Dan Schroll  
**Camera Works**

Jerry Dilley  
**Owner, Jerry's Camera Repair Service**

Dan Schroll  
**Camera Works**

Wes Fredell  
**Phototechnica**

B. Tucker  
**Tucker's Camera**

Gary Metcalf  
**Independent**

Velton Tucker  
**Owner, Tucker's Camera**

Marlon Basdeo  
**Owner, PhotoSonny**

Lance Klug  
**Kluges camera repair**

Ronald DeGood  
**Independent**

Michael Davis  
**Owner, Davis Photography**

Richard Albright  
**Owner, All-Bright Camera Repair**

Ronald Stohl  
**Independent**

Larry Bergman  
**Camera Techs**

Mark Nealand  
**Owner, A-1 Camera**

Wayne Liao,  
**Japan Camera**

Wayne Morsey  
**Southern Exposure**

Michael Mason  
**Owner, Camera Care Hawaii**

Bryce R. Wade  
**Benningham Photo Supply**

Michael Mason  
**Owner, Camera Care Hawaii**

Kevin Griffin  
**Independent**

Dan J. Johnson  
**Independent**

Ronald DeGood  
**Independent**

Wayne Gumming  
**A-1 Camera repair**

Gordon Ray  
**Independent**

Thanh Nguyen  
**Le Camera**

Michael Davis  
**Owner, Davis Photography**

John Rydman  
**Independent**

Gary Silva  
**Cape Ann Camera Repair**

Burdette Bounds  
**United Camera Repair**

T. Craig  
**Independent**

Brent Salmon  
**Independent**

Vincent Lavalle  
**Ultimate Photo**

Glen Lindsey  
**Owner, Alpine Camera**

Kevin Kline  
**Owner, PeakTech Camera Repair**

Benjamin Cach  
**Advanced Camera**

Brian McNees  
**Owner, AVC**

Roger Fullman  
**Owner**

Scott Eighmey  
**Dream Catcher Camera Repair**

Conrad Yin  
**C C Stars INTL**

Danny Detrick  
**Independent**

David Sharpe  
**Owner, Sharpe Camera Repair**

David Nealand  
**Owner, A-1 Camera**

Scott Crisman  
**Northwest Camera**

Kevin Vinson  
**Independent**

Dan J. Johnson  
**Independent**

Kevin Vinson  
**Independent**

Benjamin Cach  
**Advanced Camera**

Dale Wynn  
**Independent**

Scott Crisman  
**Owner, Cam-Comp**

Mark Nealand  
**Owner, A-1 Camera**

Burdette Bounds  
**United Camera Repair**

Kevin Griffin  
**Independent**

Michael Mason  
**Owner, Camera Care Hawaii**

Wayne Morsey  
**Southern Exposure**

John Welch  
**Owner, Cam-Comp**

Dale Wynn  
**Independent**

Dyson Lim  
**Independent**

Kevin Vinson  
**Independent**

Scott Eighmey  
**Dream Catcher Camera Repair**

Conrad Yin  
**C C Stars INTL**

Danny Detrick  
**Independent**

David Sharpe  
**Owner, Sharpe Camera Repair**

Mark Nealand  
**Owner, A-1 Camera**

Kevin Vinson  
**Independent**

Benjamin Cach  
**Advanced Camera**

Dale Wynn  
**Independent**

A few graduates!
How much does it cost?

There is a total of 19 lessons. The cost of each lesson is $180.00 + $10.40 S & H *.

$190.40 per lesson

There are no contracts or long term obligations!
The total cost for 19 lessons is $3,617.60

* Special Offer: Order the complete course for $3,400. You save $217.60.

Tools: soldering iron with tips, tweezers, Multi-meter / Digital DVM, screwdrivers with tips, anti-static strap. Your tools will be sent with Lesson 2.


Security for Lab Equipment: We need a current credit or debit checking number to secure the return our lab equipment. This is like booking a hotel room over the phone or web. Your card will not be charged.

* S&H for outside the USA and Canada is calculated by country.
* We reserve the right to update all lessons, labs and videos as needed.
Enrollment Agreement

Name: ____________________________________________

Phone: _________________________ email: ____________________________

Address: ______________________________________________

City/State: _____________________________________________

Zip: ___________________________________________________

Country: _______________________________________________

Present occupation: _______________________________________

Birth Date: _______________________________________________

Date of High School graduation or GED: _______________________

College or Technical Training: _______________________________

Have you worked in any repair business before? Yes No If so, what kind?

_____________________________________________________

Do you have an understanding of basic electricity? Yes No If so, what kind?

_____________________________________________________

Signature: _____________________________________________ Date: ________________

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<td>Check # _____________ Lesson # _____ Amount $ ________________</td>
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Use this card number for payment and lab security: [ ]

Use this Card number only to secure lab equipment: [ ]

Print Name: ______________________________

Signature: ____________________________ (Refunds given for lessons not yet sent)

Start Immediately by sending in payment for your first lesson!

** Course text sample packet available free upon request