

CONTENTS IN DETAIL

ACKNOWLEDGMENTS.....	XVII
-----------------------------	-------------

INTRODUCTION	1
---------------------------	----------

Key Maker Survival Skills.....	1
--------------------------------	---

About the Apocalypse Survival Projects	2
--	---

Resources to Download Before the Zombies Rise	4
---	---

1 • APOCALYPSE BASICS.....	5
-----------------------------------	----------

Zombies.....	6
--------------	---

Types of Zombies.....	6
-----------------------	---

Are Zombies Really Dead?	7
--------------------------------	---

How Long Will the Zombies Be Around?.....	8
---	---

Postapocalypse Survival 101.....	9
----------------------------------	---

Home	9
------------	---

Water.....	10
------------	----

Food and Fuel	11
---------------------	----

Zombie Killing	11
----------------------	----

Dressing to Kill.....	12
-----------------------	----

Staying Healthy.....	13
----------------------	----

Be Prepared	14
-------------------	----

Other Survivors.....	14
----------------------	----

Parts for Projects	15
--------------------------	----

Cars	15
------------	----

Brick-and-Mortar Parts Stores.....	16
------------------------------------	----

Project Construction	17
----------------------------	----

Soldering.....	17
----------------	----

Mechanical Construction	17
-------------------------------	----

Electronic Modules.....	17
-------------------------	----

2 • GENERATING ELECTRICITY.....	19
--	-----------

Power and Energy	20
------------------------	----

Flavors of Electricity.....	21
-----------------------------	----

Low-Voltage DC.....	22
---------------------	----

High-Voltage AC.....	23
----------------------	----

Batteries	24
Single-Use Batteries	25
Rechargeable Batteries	25
Battery Charging	25
PROJECT 1: Solar Recharging	26
Solar Panels	26
Charge Controllers	26
What You Will Need	27
Construction	28
Using the Solar Charger	33
PROJECT 2: Bicycle Generator	34
What You Will Need	35
Construction	35
Using the Pedal Generator	43
3 • USING ELECTRICITY	45
Powering Devices from a Car Battery	46
Cigarette Lighter Sockets	46
USB Power	48
AC Inverters	49
PROJECT 3: LED Lighting	49
What You Will Need	50
Construction	50
Using the Lighting	52
PROJECT 4: Battery Monitor	53
What You Will Need	54
Construction	55
Software	57
Using the Battery Monitor	61
4 • ZOMBIE ALARMS	63
PROJECT 5: Trip Wire Alarm	64
What You Will Need	65
Construction	66
Using the Trip Wire Alarm	71

PROJECT 6: PIR Zombie Detector	72
What You Will Need	73
Construction	74
Software	76
Using the PIR Zombie Detector	77
Scavenged PIR Sensors	77
5 • SURVEILLANCE AND RASPBERRY PI	81
The Raspberry Pi	82
The Raspberry Pi System	83
What You Will Need	84
Powering the System	85
Installing Raspbian	86
PROJECT 7: Monitor Zombies with a USB Webcam	87
What You Will Need	88
Construction	89
Using the Webcam	95
PROJECT 8: A Wireless Zombie Surveillance System	96
What You Will Need	97
Construction	98
Using the Wi-Fi Webcam	102
6 • ADD REMOTE ACCESS AND DETECT OPEN DOORS	103
PROJECT 9: Remote Door Lock	105
What You Will Need	106
Construction	106
Going Wireless to Open Doors Ahead of Time	111
PROJECT 10: Door Sensor	112
What You Will Need	113
Construction	114
Software	115
Using the Door Sensor	117
7 • ENVIRONMENTAL MONITORING	119
PROJECT 11: Quiet Fire Alarm	120
What You Will Need	121
Construction	122

Software	129
Using the Fire Alarm	131
PROJECT 12: Temperature Alarm	131
What You Will Need	132
Construction	132
Software	135
Using the Temperature Alarm.	137

8 • BUILDING A CONTROL CENTER FOR YOUR BASE..... 139

PROJECT 13: A Raspberry Pi Control Center.	140
What You Will Need	141
Construction	141
Software	142
Using the Control Center	148
PROJECT 14: Going Wireless with Bluetooth	149
What You Will Need	150
Construction	150
Software	154
Using the Bluetooth-Enabled Command Center.	156

9 • ZOMBIE DISTRACTORS..... 157

PROJECT 15: Arduino Flash Distractor	158
What You Will Need	160
Construction	161
Software	166
Using the Flash Distractor.	168
PROJECT 16: Arduino Movement and Sound Distractor	169
What You Will Need	170
Construction	171
Software	177
Using the Sound and Movement Distractor	180

10 • COMMUNICATING WITH OTHER SURVIVORS..... 181

PROJECT 17: A Raspberry Pi Radio Transmitter Beacon.	182
What You Will Need	182
Construction	184

Software	184
Using the FM Transmitter	185
PROJECT 18: Arduino FM Radio Frequency Hopper	188
What You Will Need	189
Construction	189
Software	194
Using the Radio Scanner	196
PROJECT 19: Arduino Morse Code Beacon	196
What You Will Need	197
Construction	198
Software	201
Using the Morse Beacon	205
11 • HAPTIC COMMUNICATION	209
PROJECT 20: Silent Haptic Communication with Arduino	209
What You Will Need	211
Construction	212
Software	217
Using the Haptic Communicator	220
A • PARTS	221
A Note on Brick-and-mortar Suppliers	222
Electronics Modules	222
Raspberry Pi and Related Parts	223
Leads and Connectors	223
Tools	224
Electronic Components	224
Other Hardware	225
Resistor Color Codes	225
B • BASIC SKILLS	227
Stripping Wires	227
Joining Wires by Twisting	228
Soldering Basics	230
Joining Wires with Solder	231
Soldering a PCB	234

Using Heatshrink	235
Using a Multimeter	237
Measuring DC Voltage.	238
Measuring DC Current	239
Measuring Resistance	240
Continuity Testing.	241
Bells and Whistles	242

C • ARDUINO PRIMER.....243

What Is an Arduino?	243
Arduino Software	245
Installing the Arduino IDE	245
Uploading a Sketch	247
Installing the Antizombie Sketches	248
Arduino Programming Basics.	249
Structure of an Arduino Sketch	249
Creating Variables and Constants.	250
Configuring Digital Outputs.	251
Configuring Digital Inputs	251
Stabilizing Digital Inputs with Pull-up Resistors	252
Reading Analog Inputs	253
Writing to Analog Outputs	254
Repeating Code in Control Loops.	254
Setting Two Conditions with If/Else	256
Making Logical Comparisons	256
Grouping Code into Functions	257
Assembling a Screwshield	259
Further Resources	261

INDEX263