

Emergency Response Go-Kits

Rev7

6 February 2025

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Cupertino ARES/RACES



CARES mission

The mission of Cupertino ARES is to maintain and train Amateur Radio volunteers capable of providing professional emergency communications, increasing the City's emergency response effectiveness, and speeding the recovery effort.



You just were activated... now what!?!

In Cupertino, we may be responding to any of the following:

- Earthquakes
- Flooding by dam failure
- Flooding by rain
- Wild land or large urban fires
- Manmade disasters (BNICE)
- Missing Person(s)

Each of these events have different communications needs and expectations on how we perform.

So, how do we prepare?



Types of Assignments

As a CARES Field Responder, you may be asked to assist with any of several assignments, from a variety of station operating locations, such as:

Base Station

- Emergency Operations Center / Comm 469
- County Fire Stations
- From Home (Message Net)

Field-Portable Station

- Incident Command Post (ARKs, Staging Areas, etc.)
- Search and Rescue Field support
- Community Access Points (911 call taking)
- Shelters

Mobile Station

- Mobile Command Post
- Shadows
- Vehicle Ride-Along (Public Works, Logistics, etc.)
- Cross-band Repeat Station Control Operator



Length of Assignments

The length of time you are asked to assist with emergency communications will depend on the type and size of the incident and the number of Field Responders available:

- One Operational Period – a few hours to less than a day
- Overnight
- Two to three days (Shifts over several days)
- Long-Duration – greater than 72 hours (County MAC Response)

The longer the assignment, the more *stuff* we need to bring to the event.



What is a Go-Kit?

- A Go-Kit is a previously identified collection of equipment and personal gear that you will need to perform your duties as an Emergency Communicator in the event of an activation.
- Your Go-Kit should be tailored to your needs, your equipment, expected assignments, and expected length of assignments.



What is a Go-Kit?

Why do you need one?

- During an activation, your assignment location may be without power, heat, water, and telephone service. Most businesses in the area might not be open because to the emergency.
- As a Field Responder, YOU must provide your own equipment and gear.
- You are responsible for your own safety, and you must provide for your own welfare and comfort.

Building your Go-Kit now ensures:

- The items you need are available when you need them.
- The items you need are where you expect them to be.
- When the Activation Call comes, you won't have time to hunt for things!

Adapted with permission from Dan O'Connor, KE7HLR

Cupertino ARES/RACES



Types of Go-Kits

Your Go-Kit should be tailored to your needs, your equipment, your expected assignments, and the expected length of assignments. Go-Kits could be broken up into different types of kits, depending on location or function:

Go-Kits by Location

- Carried on person
- Carried in vehicle
- Stored at Fixed Location (Home, Office, Shop, etc.)
- Non-cached equipment—gathered as needed (Home, Office, Shop, etc.)

Go-Kits by Function

- Types of Incident
- Type of Assignment or Mission
- Length of Assignment

Adapted with permission from Dan O'Connor, KE7HLR

Cupertino ARES/RACES



Think Modular

Basic Go-Kits

- 2 Hour Kit - always kept nearby for immediate (within minutes) communication of damage reports during an initial activation.
- 12-Hour Kit – For one operational period; for fully independent operation; unknown environment (heat, cold, wind, rain); unknown time (day, night, up to 12 hours). Return home to retrieve.
- Extended Kit – Additional items for fully independent operation over an extended period.



CARES Basic Go-Kit

Cupertino ARES/RACES Field Communications Handbook

- These are specific requirements for a Cupertino deployment by CARES members.
- See the County RACES Go-Kit, a requirement for Type IV credentials.

10 Minimum Field Deployment Equipment (Go-Kit)

Purpose: Fully independent operation, Cupertino ARK or field in environment (heat, cold, wind, rain), unknown time of day
You must have the following to participate in a CARES file

**UPDATED
for 2025**

Equipment – REQUIRED

| | | |
|-----|---|--|
| 1. | 2m/440 HT | |
| 2. | Radio user manual or cheat-sheet | |
| 3. | Ear bud or headphones | |
| 4. | Charged batteries or extra batteries for 12 hours operation | |
| 5. | Mobile antenna (mag mount or existing mobile antenna) | |
| 6. | Power cord adaptors, Cigarette lighter adaptor | |
| 7. | Spare Fuses | |
| 8. | Coax adaptors (connect HT to coax) | |
| 9. | Notepad, pens | |
| 10. | Clipboard (covered recommended) | |
| 11. | Cell phone and charger, cigarette lighter adaptor | |

Documentation, Identification – REQUIRED

| | | |
|-----|---|--|
| 12. | Amateur radio license | |
| 13. | CA driver's license or CA-issued ID card | |
| 14. | City of Cupertino Identification Badge | |
| 15. | Cupertino City Map, County Grid; off-line maps OK | |

Forms – REQUIRED (<http://www.cupertinoares.org/forms>)

| | | |
|-----|--|--|
| 16. | ICS 211 Check-in Log | |
| 17. | ICS 214 Unit Log | |
| 18. | ICS 213 Message Forms, Short Form | |
| 19. | ICS 309 Communications Log | |
| 20. | COES 105 Preliminary Safety Assessment Form, Field | |
| 21. | Incident Report Form 911 | |

Personal Gear – REQUIRED

| | | |
|-----|--|--|
| 22. | Watch or clock | |
| 23. | Flashlight, headlamp, spare batteries for 12 hours | |
| 24. | Safety vest, ANSI standard, City-issued | |
| 25. | Long pants | |
| 26. | Sturdy closed-toe shoes | |

Personal Gear – Recommended

(Some of the following items may be **REQUIRED** depending on the assignment)

| | | |
|-----|---|--|
| 27. | Fueled vehicle (always keep your fuel tank at least ½ full) | |
| 28. | Hat (broad-brim recommended) | |
| 29. | Seasonal jacket / rain gear | |
| 30. | Leather Gloves, Eye Protection | |
| 31. | Food for 12 hours, water for 12 hours | |
| 32. | First Aid Kit | |
| 33. | N95 breathing mask | |
| 34. | Compass (Ember Watch) | |
| 35. | Whistle | |
| 36. | FRS/GMRS radio | |

CARES Basic Go-Kit

**UPDATED
for 2025**

10 Minimum Field Deployment Equipment (Go-Kit)

Purpose: Fully independent operation, Cupertino ARK or field location, unknown environment (heat, cold, wind, rain), unknown time of day, 12-hour operation. You must have the following to participate in a CARES field response.

Equipment – REQUIRED

| | |
|--|--|
| 1. 2m/440 HT | |
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| 3. Ear bud or headphones | |
| 4. Charged batteries or extra batteries for 12 hours operation | |
| 5. Mobile antenna (mag mount or existing mobile antenna) | |
| 6. Power cord adaptors, Cigarette lighter adaptor | |
| 7. Spare Fuses | |
| 8. Coax adaptors (connect HT to coax) | |
| 9. Notepad, pens | |
| 10. Clipboard (covered recommended) | |
| 11. Cell phone and charger, cigarette lighter adaptor | |

Do I have this?

Yes!

Easy to get

??

Yes!

Yes!

??

??

??

Easy to get

Easy to get

Easy to get

Documentation, Identification – REQUIRED

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|---|--|
| 12. Amateur radio license | |
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Yes!

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CARES Basic Go-Kit

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Do I have this?

Yes!
Yes!
Yes!
Yes!
Yes!
Yes!

Personal Gear – REQUIRED

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| 22. Watch or clock | |
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| 24. Safety vest, ANSI standard, City-issued | |
| 25. Long pants | |
| 26. Sturdy closed-toe shoes | |

Yes!
Easy to get
CARES provides
Easy to get
??

Personal Gear – Recommended

⊕ Some of the following items may be **REQUIRED** depending on the assignment)

| | |
|---|--|
| 27. Fueled vehicle (always keep your fuel tank at least ½ full) | |
| 28. Hat (broad-brim recommended) | |
| 29. Seasonal jacket / rain gear | |
| 30. Leather Gloves, Eye Protection | |
| 31. Food for 12 hours, water for 12 hours | |
| 32. First Aid Kit | |
| 33. N95 breathing mask | |
| 34. Compass (Ember Watch) | |
| 35. Whistle | |
| 36. FRS/GMRS radio | |



Why Power Adapters?

Notes

1. Operating in the field during an emergency is all about power management.
2. Batteries are important and important to any go-kit.
3. Ensuring you can **charge** your equipment is critical.
4. Battery power can come from different sources --- your car, gel cell, LiFePO4 batteries, etc.
5. *Anderson Powerpoles* are the power interconnect standard we use for our 12vdc equipment.



Power Adapters

Basics

Getting to the source... Vehicle power plug



Power Adapters

Basics

Getting to the source... Battery terminals

**Battery clamps
with Powerpoles**



**Car Accessory socket
with Powerpoles**



**Car Accessory Plug
with radio power connector**



**Cell Phone USB
Charge connector**



Power Adapters

Basics

Do you Build or Buy?

Consider building if...

- This is a good use of your hobby time.
- You like tinkering and learning, working with your hands.
- You get satisfaction from using something that you built.
- What you need is something custom to your situation.
- You are cost sensitive.

Consider buying if...

- What you need is inexpensive and readily available.
- You have limited time to figure things out.
- You do not have the material or tools to build things.
- *Any flavor* of the item will do.
- Cost is not a concern.

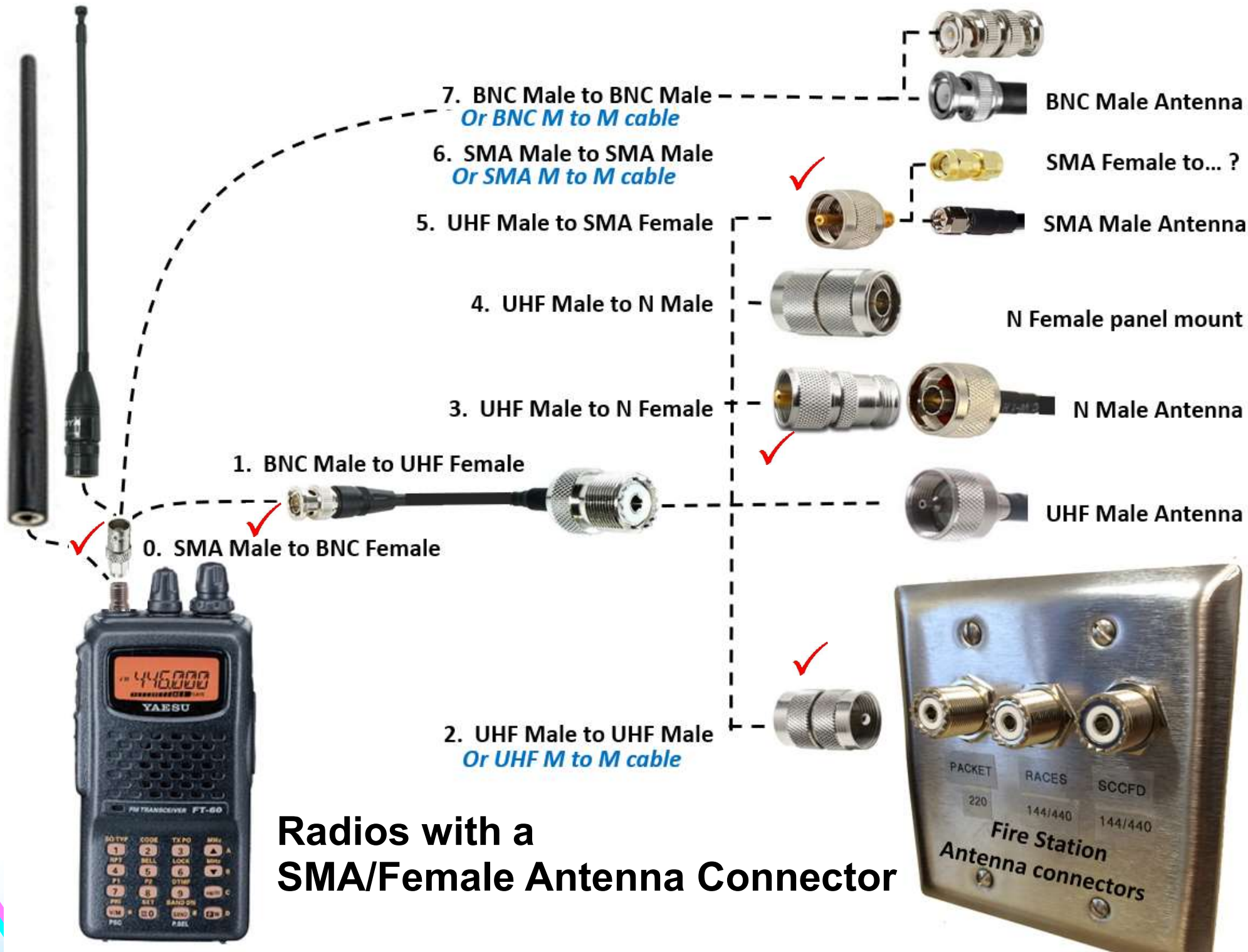


Why Coax Adapters?

Notes

1. Most HT radios are built with one of 2 connectors:
 - BNC/Female
 - SMA/Female (!)
2. The most common antenna coax connector is a UHF/Male PL259 connector.
3. Sooner or later, you may need to connect your HT to an antenna other than your stock HT antenna.
4. Getting a collection of the coax adapters now will ensure no surprises in the field later!





Radios with a SMA/Female Antenna Connector

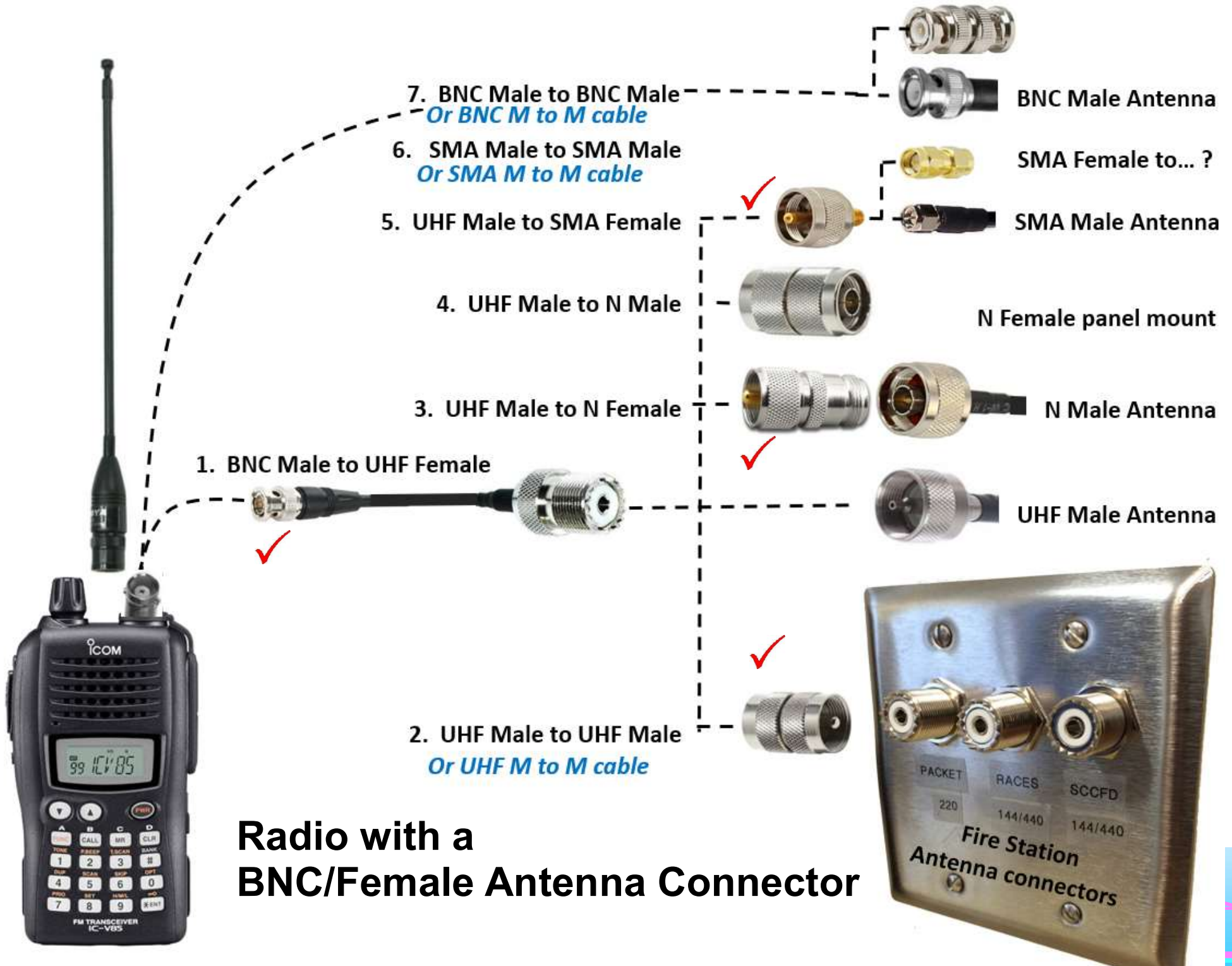
Coax Adapters

Radio with a SMA/Female Antenna Connector

| Item | Description | Mfgr | *Price Ea | Distributor |
|--------------|---|-----------|-----------------|---------------|
| ✓ 0 | SMA Male to BNC Female adapter | SMC | \$ 5.50 | Amazon |
| ✓ 1 | BNC male to UHF Female cable, 0.5m | Comet | \$ 11.99 | HRO |
| ✓ 2 | UHF male to male PL-259 connector | DHT LLC | \$ 9.29 | Showme Cables |
| ✓ 3 | N female to UHF male PL-259 adapter | DHT LLC | \$ 41.19 | Pasternak |
| 4 | N Male to UHF Male adapter | Pasternak | \$ 25.71 | Pasternak |
| ✓ 5 | SMA female to UHF male PL-259 adapter | DHT LLC | \$ 6.50 | Amazon |
| 6 | SMA Male to Male adapter | uxcell | \$ 1.22 | Amazon |
| 7 | BNC Male to Male adapter | Generic | \$ 1.00 | Amazon |
| Total | | | \$ 62.47 | |

* Prices are samples and not necessarily the best as of 2019.





Radio with a BNC/Female Antenna Connector

Coax Adapters

Radio with a BNC/Female Antenna Connector

| Item Description | Mfgr | *Price Ea | Distributor |
|--|-----------|-----------------|-------------|
| ✓ 1 BNC male to UHF Female cable, 0.5m | Comet | \$ 11.99 | HRO |
| ✓ 2 UHF male to male PL-259 connector | DHT LLC | \$ 5.50 | Amazon |
| ✓ 3 N female to UHF male PL-259 adapter | DHT LLC | \$ 6.50 | Amazon |
| 4 N Male to UHF Male adapter | Pasternak | \$ 25.71 | Pasternak |
| ✓ 5 SMA female to UHF male PL-259 adapter | DHT LLC | \$ 5.50 | Amazon |
| 6 SMA Male to Male adapter | uxcell | \$ 1.22 | Amazon |
| 7 BNC Male to Male adapter | Generic | \$ 1.00 | Amazon |
| Total | | \$ 57.42 | |

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Safety Vests

ANSI Class 2

See Tae
N6TAE



SC County RACES Recommendation

2 Hour Carry Kit

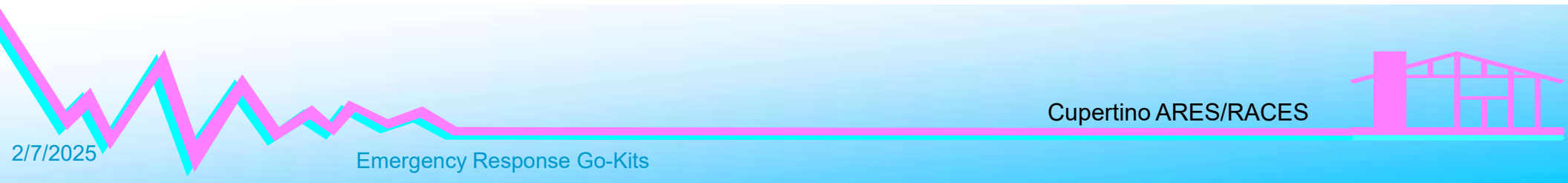
Purpose: To be always kept nearby for immediate (within minutes) communication of damage reports during Initial Activation Operations. Also used to remain in contact with Resource Net while returning home to retrieve 12-hour Go-Kit.

12 Hour Go-Kit

Purpose: For fully independent operation; unknown environment (heat, cold, wind, rain); unknown time (day, night, up to 12 hours). Usually need to return home to retrieve.



Go-Kit show and tell



References

1. CARES Go-Kits

<https://www.cupertinoares.org/docs/FieldCommOps-ebook.pdf>, page 29

2. Santa Clara County RACES Go-Kits

https://www.scc-ares-races.org/gokit/SCCo_Go_Kit_rev180603.pdf



Thank you!

Any Questions?

