



## Looking for.....

the best value in plant radios? Look no further! We offer three MIL-SPEC 810 approved models with, fast delivery, free programming, and great pricing! A Quick Review Chart is provided below. More detailed information is available on the Internet at

[www.falcondirect.com/tc610](http://www.falcondirect.com/tc610), <http://dtr2way.com/default.aspx> and [www.falcondirect.com/F50V](http://www.falcondirect.com/F50V)

Specifications	TC-610	DTR-650	F50V
  			
<b>Manufacturer</b>	<b>HYT</b>	<b>Motorola</b>	<b>ICOM</b>
Frequency Band	UHF Analog	900 MHz Digital	VHF Analog
Water protection & dust	IP66 (Washable)	IP54 (Blowing rain)	IP67 (Submersible)
Size	4.7 x 2.2 x 1.3"	5.2 x 2.3 x 1.4"	3.8 x 2.2 x 1.4"
Weight	9.52 Ounces	7.30 Ounces	9.90 Ounces
Number of channels	16	10 Talk Groups	128
Transmitter power	5 or 2 Watts	1 Watt	5 or 2 Watts
Audio output	800 mW	1000 mW	700 mW
Audible/vibrate alert	Audible only	Yes	Yes
Warranty	2 years	1 year	2 years
<b>Regular selling price</b>	<b>\$308</b>	<b>\$400</b>	<b>\$710</b>
<b>Our Price</b>	<b>Call toll free</b>	<b>1.800.489.2611</b>	<b>for special pricing</b>
Programming kit (optional)	\$60	\$175	\$129
Battery capacity & Life	1200 mAh 9 hrs+.	1500 mAh – 19 hrs.	1700 mAh – 10 hrs+.
FCC License required?	Yes (\$300)	No	No

Free programming is included with all models. Information on our available service programs is available at [www.UltraCarePlus.com](http://www.UltraCarePlus.com). In particular, check out the TimeShare program. We think you'll like it! In essence you pay a onetime cost of just \$25 for partial ownership in a spare radio. If you ever need service, you pay just \$25 for a next day exchange radio and all shipping cost during the warranty period. More information on other products is available at [www.the-communicators-net](http://www.the-communicators-net).

Our most popular option is a 5 year extended warranty at \$57 and the accessories listed below.

**Carrying case—\$29**

**Speaker-microphone—\$49**

**Spare battery—\$49**

All radios listed are available for evaluation. For additional information please visit our special web page at <http://ultracareplus.com/trials.aspx>. You're going to like doing business with us! Our job is taking care of YOU!

*Burch H. Falkner*

# A brief word about IP ratings

One of the more important ratings for portable radios is the IP (Ingress Protection) rating.

Ingress Protection is the degree of protection provided by the product enclosure. In many cases, the level of protection provided by the enclosure is marked on the product in the form of an "IP" code

## IP Codes:

Example: IP 55 would indicate a dust protected (first digit 5) piece of equipment which is protected against water jets (second digit 5)

1 <sup>st</sup> Digit	Protection Against Foreign Objects (i.e. dust)	2 <sup>nd</sup> Digit	Protection Against Moisture
0	Not protected	0	Not protected
1	Protected against objects greater than 50mm	1	Protected against dripping water
2	Protected against objects greater than 12mm	2	Protected against dripping water when tilted up to 15N
3	Protected against objects greater than 2.5mm	3	Protected against spraying water
4	Protected against objects greater than 1.0mm	4	Protected against splashing water
5	Dust protected	5	Protected against water jets
6	Dust tight	6	Protected against heavy seas
X	Unrated	7	Protection against the effects of immersion
		8	Protection against submersion

In simple terms, the greater the number, the better the product is able to withstand the rigors of rough use and bad weather.

# A brief explanation of MIL-SPEC 810 ratings

The TC-610, F50V and DTR650 are all MIL-SPEC 810 F rated. You can look up the methods and procedures for more detailed information. For now, the point is that an 810F rated radio has been more thoroughly tested and certified than E, D, or C Class certified radios. Not all radios are subjected to MIL-SPEC testing. This is not to say that they couldn't pass the applicable testing standard. In some cases, the manufacturer may not serve the military market and has chosen not to incur the cost of MIL-SPEC testing. More information on MIL-SPEC 810 is available at <http://en.wikipedia.org/wiki/MIL-STD-810>.

Standard	MIL 810C		MIL 810D		MIL 810E		MIL 810F	
	Method	Proc.	Method	Proc.	Method	Proc.	Method	Proc.
Low Pressure	500.1	I	500.2	I, II	500.3	I, II	500.4	I, II
High Temp.	501.1	I	501.2	I, II	501.3	I, II	501.4	I, II
Low Temp.	502.1	I	502.2	I, II	502.3	I, II	502.4-3	I, II
Temp. Shock	503.1	I	503.2	I	503.3	I	503.4	I
Solar Radiation	505.1	I	505.2	I	505.3	I	505.4	I
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III
Humidity	507.1	I, II	507.2	II, III	507.3	II, III	507.4	-
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	-
Dust	510.1	I	510.2	I	510.3	I	510.4	I
Vibration	514.2	VIII, X	514.3	I	514.4	I	514.5	I
Shock	516.2	I, II, V	516.3	I, IV	516.4	I, IV	516.5	I, IV



# Which radio is right for you?

All of our selected plant radios are especially suited for rugged use, reliable operation, and low cost of operation. We will review some of the more important issues as follows:

## Cost

So, what's the real difference in a \$300 and a \$500 radio? The difference appears significant until you look at the cost prorated over a minimum five year operating life. A \$300 radio has a daily operating cost of a little over \$.16 per day. A \$500 radio has a daily operating cost of approximately \$.27 per day. No license is required on two of the radios. That's good. The negative side is the potential of interference from other unlicensed users. Additionally, the UHF licensed band has proven to be an excellent choice in and around metal structures – not a bad investment for about \$.08 per day (based on 10 year license authorization).

## Performance

Assuming all radios to be capable of covering the plant area, the next consideration is the functionality of the radio. Is a vibrate alert feature useful or unnecessary? Digital radios, such as the DTR650, have the ability to send and receive text messages. Is this important? All the radios have the ability to segment users into specific talk groups with selective administrative privileges. All have some degree of water and dust protection that is generally better than other radios in the same price category. Which one do you need?

## Compatibility

Both VHF and UHF radios are compatible with wireless call boxes, wireless PA systems, repeaters, and wireless reporting devices. 900 MHz radios are incompatible for use with any of these optional capabilities. Conversely, 900 MHz is a great choice if it does what you require. Additional information on compatible VHF and UHF special products is available at <http://the-communicators.net/specialproducts.aspx>.

## Maintenance

Both the VHF and UHF radios offer a 2 year factory warranty (excluding antennas, batteries, and clips) versus one year for the 900 MHz radio. A 5 year extended warranty is available on the VHF or UHF radios for just \$57, or \$99 for the 900 MHz radio. Have you considered the impact of downtime in the event of a malfunction? For only \$25 per radio, you can enjoy the benefits of an efficient and affordable next day exchange program. If you have spare radios, this may not be important. The point is to address your requirements well in advance of actual need.

## Analog vs. Digital Technology

Both the VHF and UHF radios are analog. The 900 MHz radio is digital. There are some significant benefits to digital such as extended battery operating life, size/weight reduction, enhanced functionality (privacy, text messaging, etc.). The cost is about in the middle of UHF and VHF. The trend is toward digital but current technical, operational, and regulatory standards still favor analog through 2018 at which time mandatory conversion to digital will be required.

Still got questions? Visit <http://the-communicators.net/faqs.aspx> or just give us a call 24/7 at 205.854.2611. We're here to serve YOU!

