# **Technical Data**



**WATKINS-JOHNSON** 

May 1997

# Independent Collection Equipment (ICE) Tactical Manpack DF System WJ-8991/SYS



The WJ-8991 (ICE) DF system is a complete manpack Direction Finding and Intercept system based on the WJ-8996-1 Correlative Vector DF Processor. The flexibility of the ICE system allows for deployment on a variety of platforms. Available options (see table) allow customization to particular system requirements.

The basic manportable system consists of:

- a WJ-8996-1 DF Processor
- a WJ-9887 VHF/UFH DF Antenna with Compass
- an 8996/HHC Handheld Controller
- Tripod
- Audio Headphones
- System Cables

This system is also extremely compact and fits in an optional ALCE-type backpack. Weighing less than 50 pounds, the basic system is easily transported by a single person or DF team. The ICE system operates as a stand-alone DF/intercept system or as an element in a DF-net configuration, intended to conduct emitter location operations.

#### **Features**

- ☐ Light weight
- □ Compact
- ☐ Stand-alone or netted operations
- ☐ Flexible configuration
- ☐ Frequency coverage:
  20 to 1200 MHz
  (1200 to 2000 MHz with reduced performance)
  2 to 30 MHz with HF Array
- ☐ CE certification

#### **WATKINS-JOHNSON COMPANY**

700 Quince Orchard Road, Gaithersburg, Maryland 20878-1794 Phone: (800) WJHELPS or +(301) 948-7550

FAX: +(301) 921-9479 Email: wj.helps@wj.com Website: www.wj.com

All International sales of WJ equipment are subject to USA export license approval.

This material provides up-to-date general information on product performance and use. It is not contractual in nature, nor does it provide warranty of any kind.

## Specifications

Frequency	
Accuracy	
Sensitivity	<10 μV/m, typical
DF Processor	
DF Antenna	
Power Consumption	<20 W, typical
Power Requirements	Internal - BA-5590/U
•	External - 11 to 36 Vdc
Operating Temperature	
Storage Temperature	40 to +70°C
Shock & Vibration	
System Weight	<50 lbs (22.62 kg)

### Options

Model #	Functions	Physical Characteristics
8991/ASU Antenna Switch	Allows simultaneous connectionof both the WJ-9887 VHF/UHF DF Antenna and the WJ-9886 HF DF Array.	External Unit
9881/SYS/BP	ALCE-type Backpack	
WJ-8986 HF DF Array	Monopole Array provides coverage from 2 to 30 MHz.	See Separate Data Sheet
WJ-9887* VHF/UHF DF Antenna	Provides DF coverage from 20 to 1200 MHz. Includes compass for alignment.	See Separate Data sheet
9887/Tripod*	Deploys antenna in low profile covert platform.	
9887/MAST	Deploys to 35 ft. (10.67 meters), allowing improved sensitivity and DF accuracy. Includes binoculars with integrated compass for antenna alignment.	Stored Dimensions: - 5.4 ft. (1.65 meters) - 6 in. (15.24 cm) diameter  Additional storage bag for guy wires, stakes, and hammer  Weight: - 22 lbs (9.96 kg) - 40 lbs (18.10 kg) with accessories
8996/AC	Allows operation form a single-phase 47 to 63 Hz, 63 Hz, 90 to 264 Vac power supply.	External Unit
8996/WCS	User Interface Software in a Windows Environment with License.	486 or higher computer running Windows 3.1
8996/NBC	Laptop Computer running 8996/WCS software (included)	Standard Laptop 486 or higher processor
8996/HDPH*	Audio Headphones	Connects to J9 of the WJ-8996-1     DF Processor
8996/HHC*	Handheld Controller Interface. Low-power system system interface for tactical scenarios	Ruggedized low-power handheld computer.
8996/HHA Handheld DF Antenna	Provides DF coverage from 2 to 520 MHz for homing operations	Weighs approximately 3 lbs     (1.36 kg)
8996/HHA-1 Handheld DF Antenna	Same as 8996/HHA except coverage changes to changes to 100 to 1000 MHz	

<sup>\*</sup> Included in basic manportable system.