



IRRIGATION TRAINING AND RESEARCH CENTER

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HAND HELD DATA RECORDER (HHDR)
SPONSOR: MID-PACIFIC REGION, USBR

FACT SHEET

3/18/1999

A HHDR is used to collect data from the field and to download that data to a database to generate reports for meters in the districts. The data can be collected intermittently or on a daily basis since these are not route based data collectors. The data is collected by means of a hand held portable unit that scans a bar code identification label that is permanently affixed to the meter. Data is then entered by means of a keypad or a scan sheet and the operator goes to the next meter. At the end of the day the unit is brought back to the office and the information is downloaded into the database. This provides a quick and error-free way to enter data better than manually entering the information into a logbook.

The software for interpreting the data collected is written in Microsoft Access 7.0. This program consists of a large database, complete with tables and forms. A district would have to have Microsoft® Access 7.0 on its computer in order to run this software. The Scan-IT® System does not produce reports and is more suited to Districts that can provide their own programmers to customize the software. The EasyReader® System provides reports and is more of a turnkey system.

Components for a typical Hand Held Data Recorder System would be:

- The portable scanning unit.
- Base or docking unit.
- Software to download/upload data and manage information.
- Meter bar code labels.

Units from 2 companies are compared here. Neither unit is warrantied or promoted by ITRC or USBR.

Table 1. Comparison of a typical 4 unit set-up for a district with 500 meters to read.

Purchased from SCAN-IT (916)987-9880			Purchased from EasyReader (805) 650-7888		
Component	Quantity	Price	Component	Quantity	Price
Scanning Unit	4	\$5,300	Scanning Unit	4	\$4,466
Base Station	1	\$481	Base Station	1	\$205
Software	1	\$2,000	Software	1	\$7,200
Bar Code Labels	500	\$395	Bar Code Labels	500	\$395
		\$8,176			\$12,266

Scan-IT System

SCAN-IT
(916) 987-9880

Model: 7025 Falcon

Price breakdown:

(does not include taxes & shipping costs)

ITEM	COST
Data reader (number needed varies with district)	\$1325
NiMH battery pack (one for each Data reader)	\$55
Communications Dock (one for each district)	\$155
Dock cable (one for each district)	\$ 27
Portable battery charger/conditioner (two for each district)	\$199
Serial Cable (two for each district)	\$27
Power Supply (one for each district)	\$18
Additional costs for software/documentation.	\$1995*

* includes 90 day technical support. Includes 3 inputs for data: district, meter identification & meter reading. Three additional inputs for crop type, growth stage etc. can be custom programmed for an additional \$500-\$1000 with an approximate 2 week time period for development. This software does not produce reports and only stores the data in Access based tables and text based files. It is more suited to Districts that have Programmers that are able to modify the software to generate custom reports.

Available from:

Sales Representative: Mark Hayes, SCAN-IT, 8834 Central Ave., Orangevale, CA., 95662. Ph: (916) 987-9880, Fax: (916) 987-9881.

Software programmer: Gene Hammond, Ph: (510) 278-9490, Fax: (510) 481-1184.

Manufacturer: Percon Inc., 1720 Willow Creek Circle, Suite 530, Eugene, OR 97402-9171
(541) 344-1189, (800) 929-3221, Fax: (541) 344-1399, E-mail: info@percon.com

Specifics:

Case Construction: Polycarbonate/ABS blended plastic.

Display: LCD

Specifics (cont.):

Operating temperature range: +14° F to +122° F.

Storage temperature range: -4° F to +158° F.

Weight w/ batteries: 16.7 oz.

Memory: 2MB expandable to 4MB.

Battery type: NiMH

Battery use time: 12 hrs.

Battery recharge time: 2 hrs.

In addition to portable unit you will need:

PC with MS Access97 installed.

PC with a serial port available (COM 1, 2,3, or4).

10 MB free on your hard drive.

EasyReader System

EasyReader International
(805) 650-7888

Model: LaserLite Pro

Price Breakdown (per unit):

(does not include taxes & shipping costs)

ITEM	COST
Data reader (Initial unit, number needed varies with district)	\$1499
Additional units (each)	\$989
Communications Dock (one for each district)	\$205
Dock cable (one for each district)	incl
Serial Cable (two for each district)	incl
Power Supply (one for each district)	incl
Outright Purchase of Software,	\$7200*

*Software License Fee Program available. Contact EasyReader for details.

Available from:

Sales Representative: Euan Slidders, EasyReader International, ViewPoint West #1400
2225 Sperry Avenue, Ventura, CA 93003, (805) 650-7888, FAX: (805) 650-7898.

Manufacturer: Videx Inc., 1105 N.E. Circle Blvd., Corvallis, OR 97330
(541) 758-0521, Fax: (541) 752-5285, E-mail: sales@videx.com

Specifics:

Case Construction: Aluminum.

Display: 2 line, 16-character LCD

Operating temperature range: +32° F to +122° F.

Storage temperature range: -4° F to +140° F.

Weight w/ batteries: 13.5 oz.

Specifics (cont.):

Memory: 256KB expandable to 4MB.

Battery type: 4 AA alkaline or rechargeable NiMH

Battery use time: 12 hrs (est).

Battery recharge time: 2 hrs.

In addition to portable unit you will need:

PC with MS Access97 installed.

PC with a serial port available (COM 1, 2,3, or4).

10 MB free on your hard drive.

Operation:

The LaserLite Pro hand held scanner prompts the user through a series of steps to record, user names, activities and values.

The EasyReader System carries out the functions of downloading the data gathered in the LaserLite Pro to the PC, processes that data and prepares reports for water meter usage, crops and crop stages for meter locations, etc. It also allows for uploading the new meter readings processed by the system database into the LaserLite Pro ready for the next field session. No accounting functions have yet been added.

Systems development can be made available for each Water District to customize the EasyReader application and database program at additional cost. However, future modules will be made available to all districts.

Bar Code Labels

Bar code labels are manufactured by MetalCraft. Product # XPA191. Format: Code 39.
Dimensions: 2" X 5/8" Material: 0.008" anodized aluminum. Affixed by a permanent pressure-sensitive 3M adhesive. Cost (for 500 or more): \$79.77/100 (not including shipping & tax costs).
They can be ordered through SCAN-IT, EasyReader or ordered directly form MetalCraft, 1-(800) 437-5283.

Districts that have ordered the Scan-IT System:

Delano-Earlimart Irrigation District has ordered 5 units.
Glide and Kanawha Water Districts have ordered 4 units .

Districts that have ordered the EasyReader System:

Westside Water District has ordered two units.
CCID is currently in software development.