

# handic®



## OWNER'S MANUAL FOR **handic 006** SCANNING RECEIVER



**handic**  
bolagen



Telex 2558 Telephone 031-45 0180  
Box 156 S-42122 V. Frölunda, Sweden

Observe! **handic** is our registered trade-mark.

The **handic 006** Scanning Radio Receiver is designed for listening to narrow-band FM channels of public service communications.

Your **handic 006** is a compact dual band VHF (Mid and High) 8 channels scanning monitor, double conversion superheterodyne receiver. Designed for mobile use. Can also be used as base station, but then **handic 006** has to be connected to mains via a battery eliminator.

The circuitry is all solid state, mounted on a rugged printed circuit board. It is skillfully constructed to provide the reliable troublefree performance you expect.

## FEATURES

- \* Neoprene rubber frame and control knobs for your own safety.
- \* Automatic crystal-controlled scanning over 8 channels.
- \* Two functions are provided, Scan/Manual.
- \* High sensitivity and selectivity, double conversion superhet with two ceramic filters.
- \* Squelch control, to eliminate background noise.
- \* External speaker jack allows you to use external speaker.

# SPECIFICATIONS

## GENERAL

Semiconductors	3 ICs, 26 transistors, 8 LED and 27 diodes
Antenna Impedance	50 ohms, Motorola type receptacle
Speaker	Built-in, 57 mm. dynamic type, 8 ohms
Audio Output	2 Watt
Power Requirement	12 — 15 V DC, Negative Ground only
Power Consumption	10 Watt maximum
Dimension	115 W x 45 H x 165 D mm.
Accessories	Mobile mounting bracket with two screws
Receiving System	Crystal controlled double conversion superheterodyne
Frequency Coverage	VHF Mid: $79 \pm 3$ MHz VHF Hi : $166 \pm 4$ MHz
Intermediate Frequency	1st: 10.7 MHz, 2nd: 455 kHz
Filter	Ceramic type filter for 1st and 2nd IF.
Sensitivity	VHF Mid: $1.0 \mu\text{V}$ at 79 MHz VHF Hi : $1.0 \mu\text{V}$ at 166 MHz
Selectivity	$-6 \text{ dB} \pm 13.5 \text{ kHz}$ , $-50 \text{ dB} \pm 20 \text{ kHz}$
Image Ratio	VHF Mid: 35 dB at 79 MHz VHF Hi : 33 dB at 166 MHz
Signal to Noise Ratio	50 dB ( $100 \mu\text{V}$ , 5 kHz Div. at 1 kHz)
Squelch Sensitivity	Less than $0.5 \mu\text{V}$ threshold
Crystal Type	HC-25/u
Scanning Channels	8 channels, with lamp indicators
Scanning Rate	20 channel/sec.
Squelch Delay Time	2 seconds

# CONTROLS LOCATION AND FUNCTION

**OFF-VOLUME** is the power switch and Volume control. When not in use, rotate this control fully counter-clockwise to turn it off.

**SQUELCH control** is to eliminate annoying background noise between signal transmissions. When properly set, Squelch will keep the **handic 006** silent until a signal comes in on the channel(s) you are listening to—then the Squelch circuit will “open” and you hear the signal.

**Selector Switch** is for determining the function of the scanning feature. In the **SCAN** position, each channel will be scanned automatically. In the center (stop) position, the **handic 006** will not scan, but will remain tuned to the channel indicated by the LED. To advance the receiver to the next channel in sequence, press to the **MANUAL** position momentarily; each time you do so, the receiver will advance one channel.

**Channel Lock-out Switches**—in the “up” position (button next to the LED), that channel is active. When you press the switch down, that channel is automatically “locked-out” and will not function.

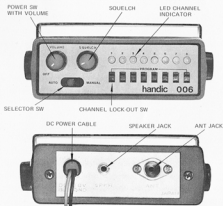
**LED Channel Indicators**—these Light Emitting Diodes show which channel(s) is active. During scanning, these lights light up in sequence; when the receiver is operative on one of the channels, the light for that channel will go on. When the Channel Lock-out switch for that channel is in the down position, that LED will not light.

**SPKR jack** is for plugging in a 3.2 - 16 ohms speaker. Use it for private listening or in areas where background noise is excessive. (in a vehicle, etc.)

**ANT jack** is for connection of an external antenna to the **handic 006**.

**DC power cables** connect to 12 V negative ground source.

# CONTROLS AND THEIR FUNCTIONS



## OPERATION

After batteries and antenna have been connected and crystals have been installed, your **handiC 006** is ready to use.

Turn VOLUME "on" by rotating clockwise. Rotate SQUELCH to the minimum position by rotating anti-clockwise. Set all the Channel Lock-out Switches "on" (in the up position, toward the LED indicators). You should hear a rushing sound from the speaker. Now adjust SQUELCH clockwise until you reach the point where the rushing background noise abruptly stops.

If you want the **handiC 006** to continuously scan channels for which you have crystals installed, you must adjust SQUELCH as previously instructed, then set the Selector Switch to the SCAN position. The **handiC 006** will constantly scan each channel in sequence; when a signal appears on one of the channels the receiver will lock onto that channel and you will hear the signal.

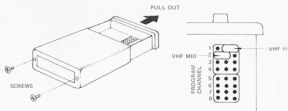
If you do not want automatic scanning on one or more channels, switch their Channel Lock-out Switches to the "off" position (down, away from the LED indicator).

If you want to stay tuned to one channel only, set the Selector Switch to the center position (stop scanning) and then press to the MANUAL position to advance to the channel you want to listen to (as indicated by the LED above that channel switch). For MANUAL scanning, the receiver can be either "squelched" (adjusted as previously indicated) or "unsquelched" (SQUELCH control set to maximum counter-clockwise. For AUTOMATIC scanning, SQUELCH must be set to eliminate the background noise.

To eliminate the annoying background noise, rotate SQUELCH clockwise until the background noise abruptly stops. You can't adjust SQUELCH properly while listening to a station, so wait until signals cease. If you set SQUELCH as noted above, the **handic 006** will appear "dead" until a signal comes in; when a signal comes in, the Squelch circuit "opens up" and you hear the signal. When the signal ceases, the Squelch circuit "closes" and cuts out all sound until the next signal comes in.

## CRYSTAL INSTALLATION

Crystal sockets are provided on the printed circuit board. Pull out the chassis and plug crystal (crystals) into sockets as shown below.



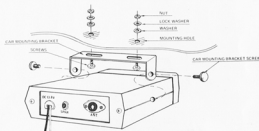
## ANTENNA SYSTEM

Your **handic 006** is designed to receive most efficiently at 50 ohm antenna impedance. Use coaxial cable with impedance of 50 ohms.

## MOBILE INSTALLATION

You should mount the **handic 006** under the dashboard where ventilation is adequate. If you mount it elsewhere, take care to avoid areas of excessive heat which may damage components.

When you have determined the best location for mounting, use the Mounting Bracket as a template to mark mounting holes. Take care when you drill holes so that you do not drill into wiring, trim or other accessories. Mount in position with bolts, lockwashers and nuts.



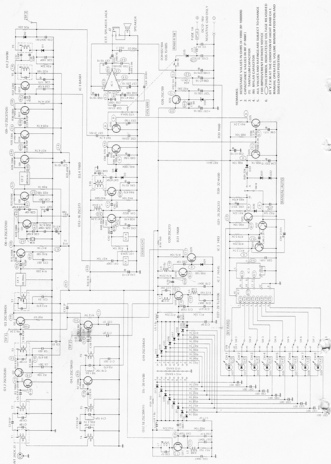
**CAUTION:** Install this Receiver only in 12 volts DC systems with negative ground.

Connect the Red (positive) wire with in-line fuseholder to the accessory terminal on the ignition switch of your vehicle. Make a good mechanical and electrical connection to the frame of the vehicle for the Black (negative) wire.

## ACCESSORIES (OPTIONAL)

**handic** Crystals   **handic** Antennas   **handic** DC Power supplies  
**handic** BK305 Power pack which makes **006** portable.

### SCHEMATIC DIAGRAM



Flera gamla instruktionsböcker & kodlistor finner du på  
[www.borlange-pd.se](http://www.borlange-pd.se)