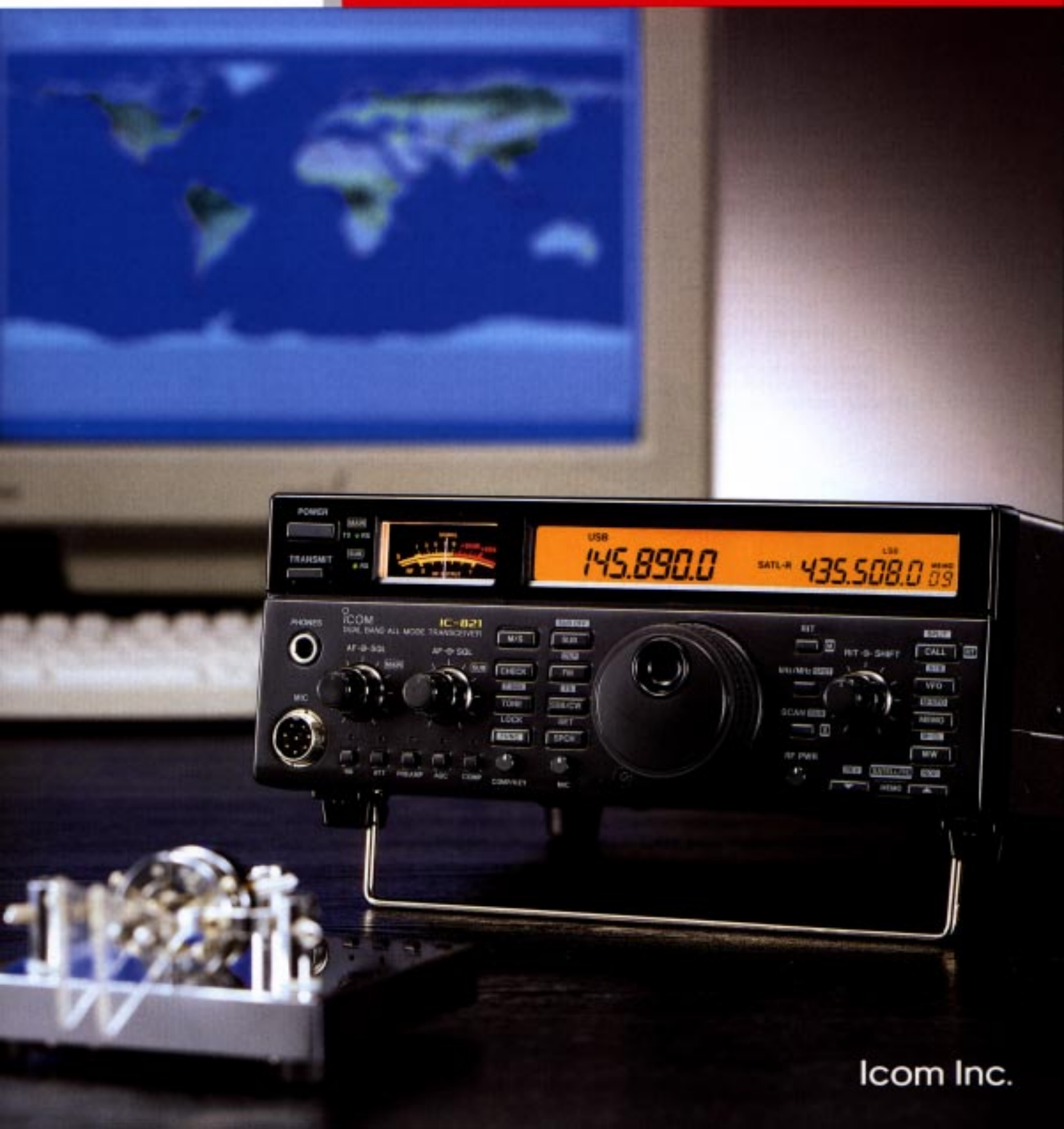
ICOM

DUAL BAND ALL MODE TRANSCEIVER

IC-821H



Icom Inc.

DUAL BAND ALL MODE TRANSCEIVER

IC-821H

Icom brings you the latest in dual band all mode technology. The IC-821H features compact size and easy operation—in fact, it's as compact as many single band transceivers. And while simple operation usually equates with limited functions, the IC-821H is easy to use and is loaded with enough functions and performance to satisfy even the most demanding of users—including digital satellite and CW operators.

Compact and lightweight

The IC-821H joins Icom's lineup of small, lightweight base stations*—not only a great addition to your shack, but also a great choice for mobile or field operation. And small size doesn't mean small performance. This rig boasts superior performance and specifications such as high frequency stability of ±3 ppm and 100% duty cycle operation.

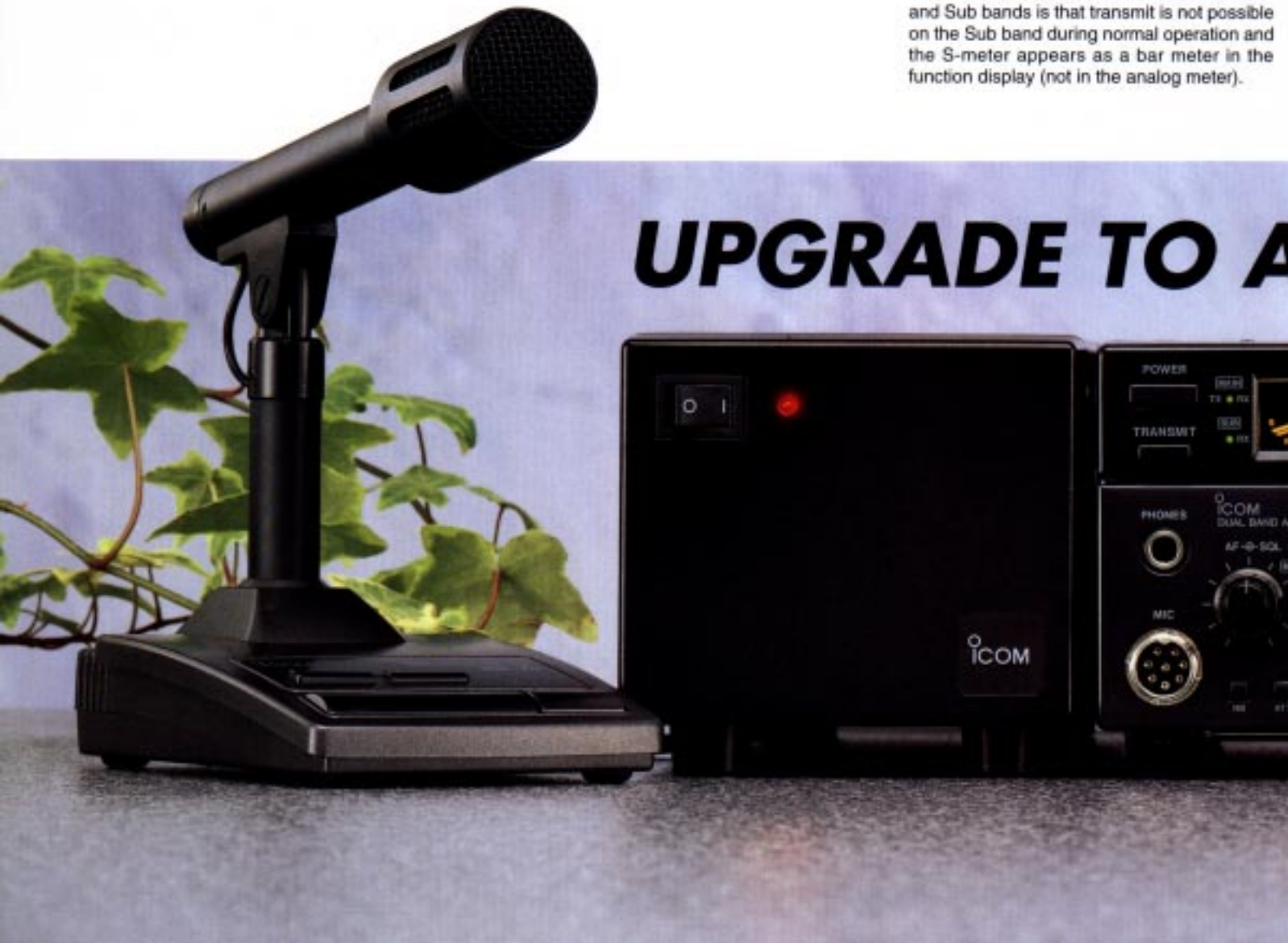
*241(W) x 94(H) x 239(D) mm; 5.0 kg
9.5(W) x 3.7(H) x 9.4(D) in; 11.0 lb

Flexible Main/Sub band operation

For V/U band operation, Main and Sub bands are available. But unlike many other transceivers, the Sub band is an "equal partner."

Independent volume/squelch controls provide simplified operation; the action of the RF attenuator and preamplifier can be selected for either both or only one of the bands; and, RIT and IF shift can be adjusted separately. In addition, scan functions on the Sub band can be activated independently from Main band operations.

The essential difference between the Main and Sub bands is that transmit is not possible on the Sub band during normal operation and the S-meter appears as a bar meter in the function display (not in the analog meter).



Great satellite communications

The IC-821's built-in satellite functions make satellite operation easier than ever. A separate VFO and 10 memory channels are provided specifically for satellite operation, making it simple to recall your most used frequencies.

In satellite mode, the Sub band is set to the transmitter (uplink) frequency and the Main band is set to the receiver (downlink) frequency. In this way, the analog S-meter, IF shift, noise blanker and RIT functions can be used for receiving. This is convenient for fine-tuning the transceiver's operation to your needs.

Also, CW (including CW narrow*) can be used with an electronic keyer in satellite mode. A Tx/Rx frequency tracking function with normal/reverse shift tracking is standard.

*An optional FL-133 (CW narrow filter for the sub band) is required.

Receive (downlink) Transmit (uplink)

While compensating for Doppler shift

Tuning downlink frequency independently

Excellent support for CW

CW enthusiasts will not be disappointed with the IC-821H. An electronic keyer is built-in and optional CW-narrow filters are available separately for the Main and Sub bands. Advanced CW features include adjustable keying speed and dot/dash ratio; delay time for semi break-in operation is adjustable; the connected paddle operation can be reversed; and, the side-tone circuit is synchronized with the transceiver's volume.

Dot/dash ratio setting in set mode

9600 bps packet capability

For high speed packet operation a transceiver should have excellent C/N ratio and frequency stability as well as direct audio modulation. Packeteers will be happy to know, the IC-821H meets all of these conditions and more. Additional packet features include: selectable data rates of 1200 or 9600 bps, modulation signals from the ACC are adjustable for various input levels, a modulation limiter circuit, and direct connection to a packet modem via the ACC connector.

9600 bps selection in set mode

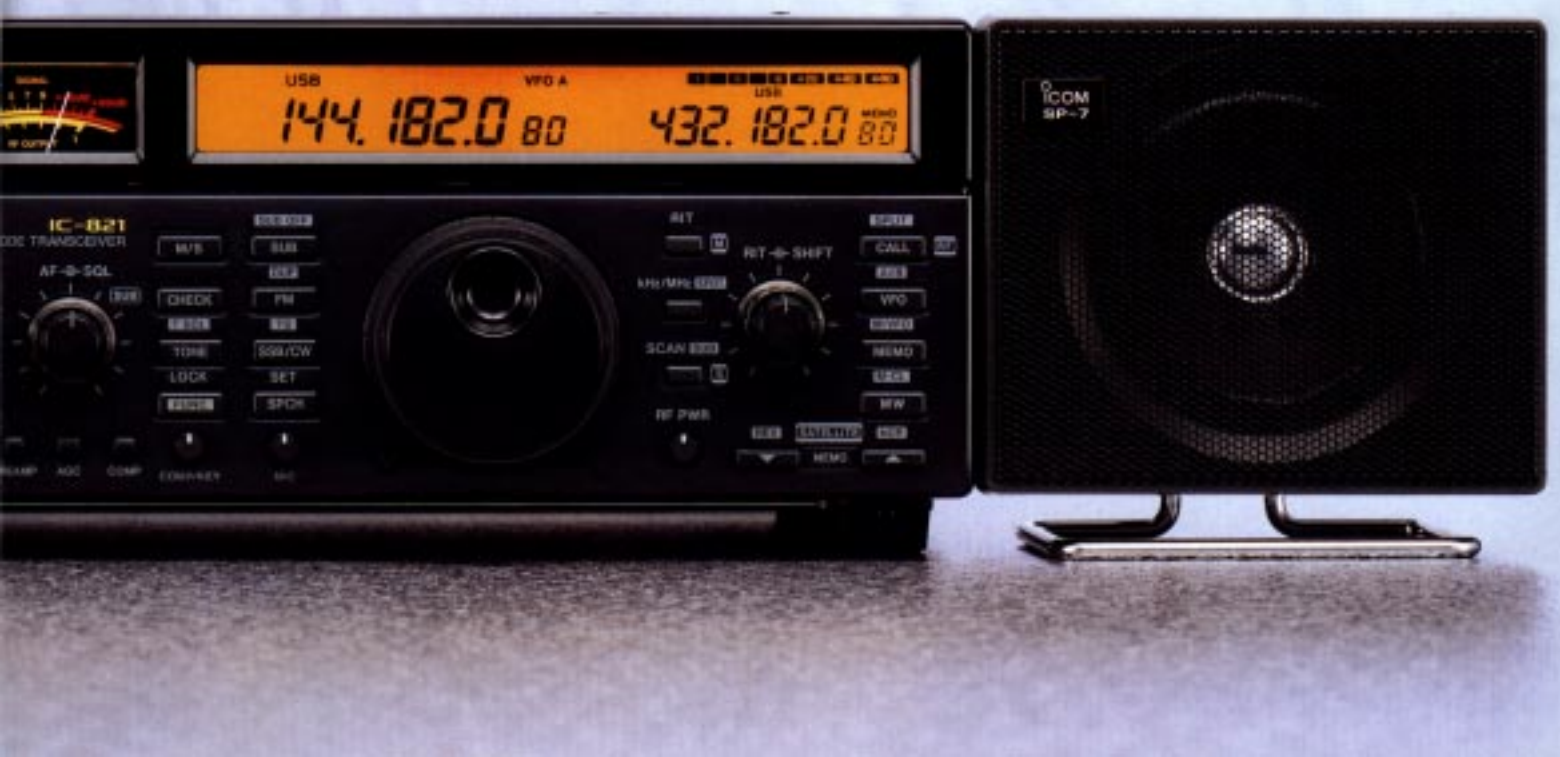
Spot function

The new spot function allows you to conveniently mark or store a DX station temporarily. When tuning across the memorized frequency, a beep sounds to alert you.

Other features

- Continuously adjustable TX output power
- IF shift for either main or sub band
- 160 memory channels (80 per band) for storage of freq., mode, repeater settings, etc.
- 4 types of scan which can be activated on each band independently
- AF speech compressor for increasing average talk power
- Auto repeater (U.S.A. and Australia only) and one-touch repeater functions
- RIT function built-in
- RF attenuator
- Noise blanker
- Tone encoder standard (except Europe version)
- FM center indicator
- Transmit indicator brightness level functions as an ALC meter
- Separate speaker jacks for each band
- Dial lock
- AGC time constant control
- Squelch monitor function
- Computer interface capability with Icom's CI-V bus

N ALL MODE DUAL BANDER



DUAL BAND ALL MODE TRANSCEIVER

IC-821H

SPECIFICATIONS

GENERAL

- Frequency coverage : Unit: MHz

	VHF	UHF
U.S.A.	144.00–148.00*	430.00–450.00
Europe	144.00–146.00	430.00–440.00
Australia	144.00–148.00	430.00–450.00
Sweden	144.00–146.00	432.00–438.00

*Receive: 136.0–174.0 (Guaranteed: 144.0–148.0)

- Mode : SSB, CW, FM
- Number of memory channels : 160 (80 channels for each band)
- Antenna connector : VHF SO-239 (50 Ω) UHF Type-N (50 Ω)
- Usable temperature range : −10°C to + 60°C (+14°F to +140°F)
- Power supply requirement : 13.8 V DC ±15% (negative ground)
- Current drain (at 13.8 V DC) : Transmit Max. power 16.0 A
  Receive Standby 2.0 A
  Max. audio 2.5 A
- Dimensions : 241(W) x 94(H) x 239(D) mm
  (projections not included) 9.5(W) x 3.7(H) x 9.4(D) in
- Weight : 5.0 kg (11.0 lb)

TRANSMITTER

- Output power (continuously adjustable) : VHF SSB 6–35 W
  FM, CW 6–45 W
  UHF SSB 6–30 W
  FM, CW 6–40 W
- Modulation system : SSB Balanced modulation
  FM Variable reactance modulation
- Spurious emissions : Less than −60 dB
- Carrier suppression : More than 40 dB
- Unwanted sideband suppression : More than 40 dB
- Microphone connector : 8-pin connector (600 Ω)

RECEIVER

- Receive system :
  VHF SSB, CW Single conversion superheterodyne
  FM Double conversion superheterodyne
  UHF SSB, CW Double conversion superheterodyne
  FM Triple conversion superheterodyne
- Intermediate frequencies

	Mode	MAIN band 1st	MAIN band 2nd	MAIN band 3rd	SUB band 1st	SUB band 2nd	SUB band 3rd
VHF	SSB	10.8500	—	—	10.9500	—	—
	CW	10.8491	—	—	10.9491	—	—
	FM	10.8500	0.4550	—	10.9500	0.4550	—
UHF	SSB	71.2500	10.8500	—	71.3500	10.9500	—
	CW	71.2491	10.8491	—	71.3491	10.9491	—
	FM	71.2500	10.8500	0.4550	71.3500	10.9500	0.4550

Unit: MHz

- Sensitivity (both VHF and UHF bands)
  SSB, CW 0.11 µV for 10 dB S/N
  FM 0.18 µV for 12 dB SINAD
- Squelch sensitivity (both VHF and UHF bands)
  SSB, CW Threshold/Tight Less than 1.0 µV/3.2 mV
  FM Threshold/Tight Less than 0.1 µV/3.2 mV
- Selectivity
  SSB, CW More than 2.3 kHz/−6 dB Less than 4.2 kHz/−60 dB
  FM More than 15.0 kHz/−6 dB Less than 30.0 kHz/−60 dB
- Spurious and image rejection ratio : More than 60 dB
- Audio output power (at 13.8 V DC) : More than 2.0 W at 10% distortion
- IF shift variable range : More than ±1.2 kHz
- RIT variable range
  SSB, CW More than ±1.0 kHz
  FM More than ±5.0 kHz
- External speaker connector : 2-conductor 3.5 mm (⅛") 8 Ω connector x 2
  (for MAIN and SUB bands)

All stated specifications are subject to change without notice or obligation.

OPTIONS

Available options may vary between countries.

■ PREAMPLIFIERS

- **AG-25/AG-35** WEATHERPROOF PREAMPLIFIERS
  External all-weather, mast-mounting preamplifier for compensating for coaxial cable loss.
  AG-25: for VHF; AG-35: for UHF.

■ POWER SUPPLIES

- **IC-PS30** DC POWER SUPPLY 13.8 V, 25 A
  System power supply. Equipped with 1 DC power cable and 3 output connectors. Cannot be used with Europe or Sweden versions.
- **PS-85** DC POWER SUPPLY 13.8 V, 20 A
  Style and size are matched to the IC-821H.

■ INTERNAL UNITS AND FILTERS

- **FL-132/FL-133** CW NARROW FILTERS
  FL-132 is for the main band; FL-133 is for the sub band and satellite operation.
  Center freq.: 10.8491 MHz (FL-132); 10.9491 MHz (FL-133)
  Passband width: 500 Hz/−6 dB
- **CR-293** HIGH STABILITY CRYSTAL UNIT
  Frequency stability: ±0.5 ppm at 0°C to +60°C.
- **UT-84** TONE SQUELCH UNIT
  Provides tone squelch and tone scan functions. One unit can be used for both bands simultaneously.
- **UT-102** VOICE SYNTHESIZER UNIT
  Provides audible confirmation of frequency and mode with a clear, electronically-generated voice.

■ MICROPHONES

- **HM-12** HAND MICROPHONE
- **HM-14** DTMF HAND MICROPHONE
- **SM-20** DESKTOP MICROPHONE

■ EXTERNAL SPEAKERS

- **IC-SP3** EXTERNAL SPEAKER (8 Ω/4 W)
- **SP-7** EXTERNAL SPEAKER (8 Ω/5 W)
- **SP-20** EXTERNAL SPEAKER (8 Ω/5 W)
- **SP-21** EXTERNAL SPEAKER (8 Ω/5 W)

■ OTHERS

- **CT-17** CI-V LEVEL CONVERTER
- **IC-MB5** MOBILE MOUNTING BRACKET
- **MB-23** CARRYING HANDLE

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