

# ADVANCED AMATEUR RADIO EQUIPMENT FOR THE SEVENTIES FROM YAESU



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- **Advanced Amateur Communications Equipment from the World's Leader in Communications Products**

This catalogue offers you the finest line of amateur radio equipment available today.

At Yaesu Musen Company, amateur radio equipment is our only business; in many other companies it is only a sideline. We are dedicated to the advancement of amateur product technology.

- **Total Spectrum Coverage from 160 thru 2 Meters with Equipment for Every Application:**

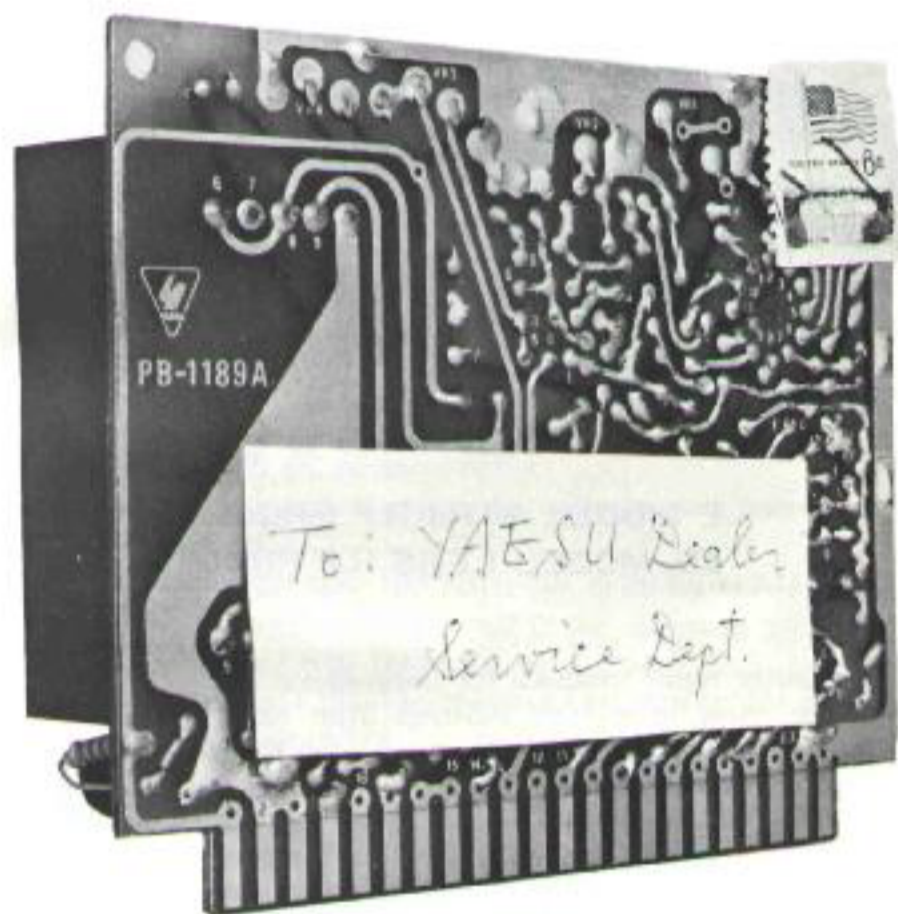
- \* **Mobile**
- \* **Portable**
- \* **Base**

Over 130 licensed radio amateurs employed at Yaesu proudly offer you the most diversified communications product line available; SSB, CW, AM & FM equipment - all designed for today's active amateur.

- **Advanced Concepts in Design Technology**

Innovation has been the key to YAESU'S success in the amateur market. Yaesu was the first to integrate "computer type", glass-epoxy, plug-in modules into amateur radio equipment. A flexible and a versatile line of accessories provide the operating convenience which the demanding amateur requires.

## Repair by Mail



## World Wide Sales & Service Network

Whatever your location, your Yaesu distributor is ready to assist you with your needs. Our new modular plug-in system allows you to mail a module directly to your nearest authorized dealer for immediate service.

## Visit Your Dealer Today

There are many reasons for you to choose Yaesu and they are best summed up as PERFORMANCE AT THE RIGHT COST. Your dealer will proudly demonstrate why the finest sounding signals heard around the world originate from YAESU equipment.

**YAESU ELECTRONIC CORPORATION**  
P.O. BOX 498  
PARAMOUNT, CALIFORNIA 90723, U.S.A.

**EAST COAST SERVICE CENTER**  
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CINCINNATI OHIO 45215, U.S.A.

**YAESU MUSEN CO., LTD.**  
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TOKYO, JAPAN

# Deluxe Mobile/Base Station FT-101E/EE

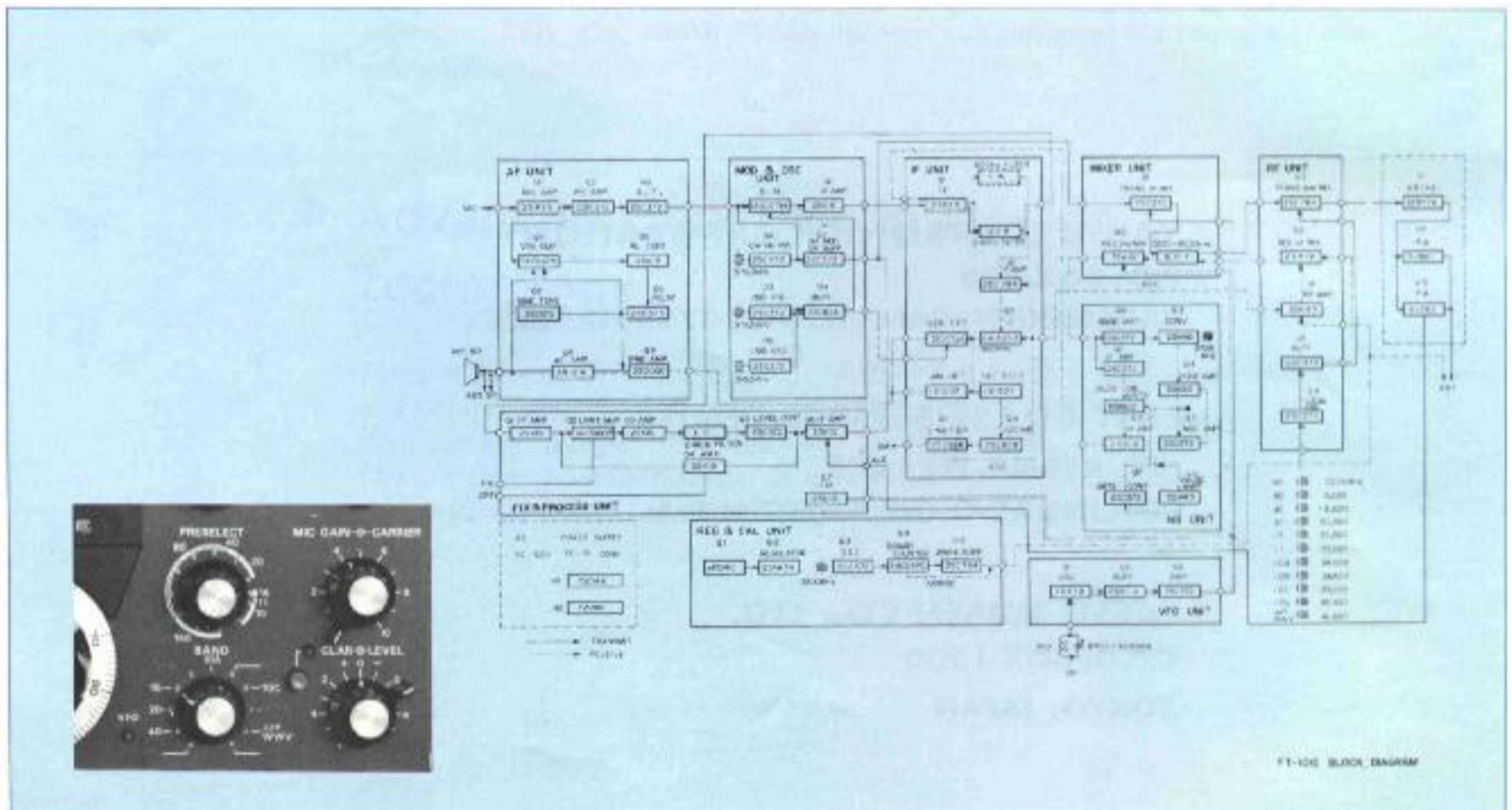


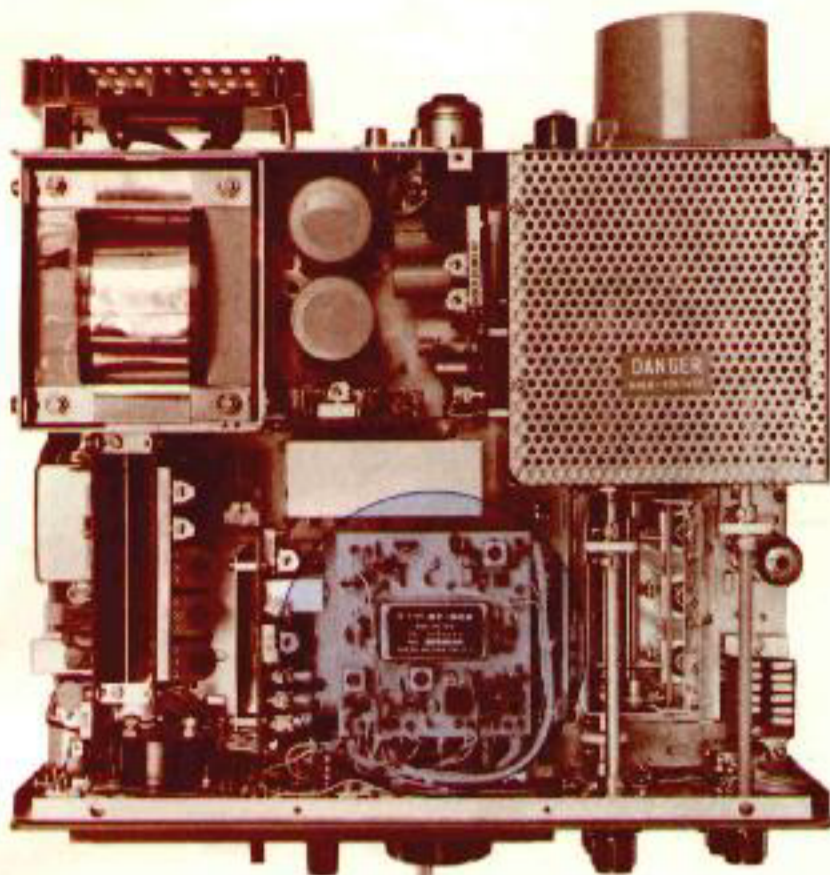
E MODEL WITH R.F.PROCESSOR  
EE MODEL LESS R.F.PROCESSOR

## ● Solid State 160 thru 10 Meter Transceiver

The world's number one transceiver now offers even more value and performance in one compact, thirty pound package. An effective RF Speech Processor is a built-in integral part of this exciting transceiver. Now you can realize that extra talk power to cut through the pile-ups without the addition of a linear amplifier. Except for the final and driver stages, the FT-101E/EE features the latest in solid state technology, incorporating time proven, plug-in

"computer type" modules for unparalleled reliability and service. New lever type switches offer easier operation. Here is a complete radio station designed to go anywhere—ideal for today's active amateur. Just add an antenna and 12 VDC or 100-234 VAC for instant operation on 160 thru 10 meters. The FT-101E/EE is another step forward in amateur communications from the world's leader in communications equipment YAESU-The Radio Company.





Built in R.F. Speech Processor

## Features

- \* Built-in AC & DC power supplies
- \* Built-in RF-speech Processor for increased talk power (E model only)
- \* 260 Watts PEP SSB, 180 Watts CW, & 80 Watts AM.
- \* Factory sealed, solid state VFO for optimum stability and accurate 1 KHz readout
- \* Effective Noise Blanking, threshold adjustable, for elimination of noise spikes
- \* Built-in, fully adjustable VOX
- \* Automatic break-in CW operation with sidetone
- \* Selectable 25 kHz and 100 kHz calibrator
- \*  $\pm 5$  kHz receiver clarifier w/separate ON/OFF switch
- \* Built-in WWV/JJY reception
- \* Heater switch to shut off final tubes for conservation of current drain
- \* Reliable easy to operate lever switch
- \* Adjustable carrier level for tune-up and novice operation
- \* Built-in speaker
- \* High-Q, permeability tuned, RF stages to provide the performance required even in base station operation.
- \* Includes dynamic, hand-held type microphone
- \* Indicator lights for internal VFO and clarifier operation
- \* Eight pole SSB filter for unparalleled selectivity on today's crowded bands
- \* All mode operation - SSB, CW, & AM
- \* Built-in internal crystal control provision and Dual VFO adaptor
- \* Complete line of compatible accessories for flexible station design

## Specifications

### GENERAL

**Frequency Range:** 1.8-2.0 MHz, 3.5-4.0 MHz, 7.0-7.5 MHz, 14.0-14.5 MHz, 21.0-21.5 MHz, 28.0-29.9 MHz, WWV 10.0-10.5 MHz (receive only).

**Mode:** Selectable USB, LSB, CW or AM.

**Frequency Stability:** Within 100 Hz during any 30 minute period after warm-up. Not more than 100 Hz with 10% line voltage variation.

**Calibration Accuracy:** 2 kHz maximum after 100 kHz calibration.

**Backlash:** Not more than 50 Hz.

**Antenna Impedance:** 50 to 75 Ohm unbalanced nominal.

**Circuitry:** 40 Transistors, 3 Integrated Circuits, 38 Diodes and 3 Tubes.

**Power Requirement:** 100/110/117/200/220/234 V AC, 50/60 Hz, 350 Watts maximum, or 13.5 V DC nominal, 5 A for standby, 0.5 A for receive

(Heater OFF) and 20 A for transmit.  
**Size:** 340(W) x 153(H) x 285(D) m/m.  
**Weight:** 15 kg.

### RECEIVER

**Sensitivity:** 0.3  $\mu$ V for 10 dB Noise plus Signal to Noise Ratio on 14 MHz.

**Selectivity:** 2.4 kHz nominal bandwidth at 6 dB down, 4.0 kHz at 60 dB down on SSB, CW and AM. 600 Hz nominal bandwidth at 6 dB down, 1.2 kHz at 60 dB down with optional CW filter.

**Harmonic & Other Spurious Response:** Image Rejection better than 50 dB. Internal Spurious Signal below 1  $\mu$ V equivalent to antenna input.

**Automatic Gain Control:** AGC threshold nominal 3  $\mu$ V. Attack time 8 milliseconds and release time 1800 milliseconds.

**Audio Noise Level:** Not less than 40 dB below 1 watt.

**Audio Output:** 3 Watts to internal or external speaker at 4 Ohm impedance.  
**Audio Distortion:** Less than 10% at 3 Watts output.

### TRANSMITTER

**Input Power:** 260 Watts PEP on SSB, 180 Watts on CW at 50% duty cycle and 80 Watts on AM except for 160 meter. (Slightly lower on 10 meter.)

**Microphone:** 50 K Ohm dynamic type.

**Carrier Suppression:** -50 dB.

**Sideband Suppression:** -50 dB.

**Spurious Radiation:** -40 dB.

**Distortion Products:** -30 dB.

**Frequency Response:** 350 to 2700 Hz  $\pm 3$  dB.

**Final Tube:** 6JS6C x 2.

# FT-101E Accessories for Flexible &



## ● 1200 Watt Linear Amplifier FL-2100B

The FL-2100B is a conservatively rated matching amplifier for the FT-101E. This amplifier features two rugged 572B carbon plate tubes in a class B grounded-grid circuit with individually tuned input coils for each band. The FL-2100B operates on 80 thru 10 Meters with dual cooling fan and a solid-state power supply with an effective 28 uF filter system, providing reserve ratings and linear operation. Dual

interlocks offer safety and shock protection. An automatic changeover circuit biases the tubes to cut off on receive to maximize tube life and minimize heat. Bifilar wound, ferrite filament chokes guarantee minimum RF transfer to the power source. The FL-2100B offers maximum performance in one compact package.

## Features

- \* Conservative, 1200 Watts PEP input on 80-10 Meters
- \* Easy primary voltage change from 117-234 VAC
- \* Dual front panel meters provide continuous monitoring of plate current and voltage
- \* Built-in, front panel adjustable SWR meter
- \* Individually tuned input coils on each band for maximum efficiency and minimum distortion

## Specifications

**Frequency Range:** 3.5-4.0 MHz, 7.0-7.5 MHz, 14.0-14.5 MHz, 21.0-21.5 MHz, and 28.0-29.9 MHz.

**Plate Input Power:** 1200 Watts PEP on SSB, 800 Watts on CW at 50% duty cycle and 600 Watts on AM and RTTY.

**Drive Requirement:** 30 to 100 Watts.

**Input Impedance:** 50 Ohm unbalanced.

**Output Impedance:** Nominally 50 Ohm unbalanced with not more than 2.1 SWR

**Distortion Products:** -30 dB at 1200 Watts input.

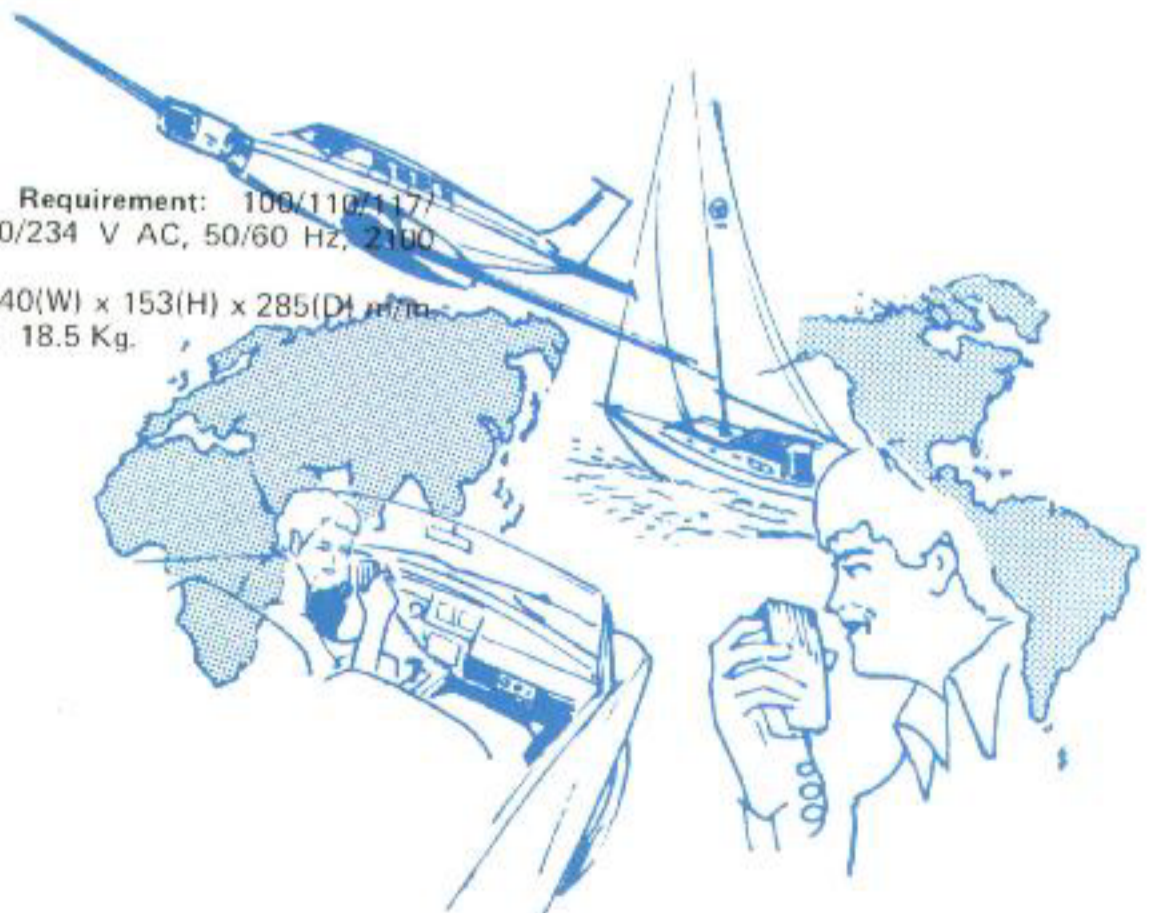
**Noise Level:** 40 dB below single tone carrier.

**Circuitry:** A pair of 572B in ground grid circuit.

**Power Requirement:** 100/110/117/200/220/234 V AC, 50/60 Hz, 2100 Watts.

**Size:** 340(W) x 153(H) x 285(D) mm

**Weight:** 18.5 Kg.



# Simplified Station Design



## ● External VFO FV-101B

Match up the FV-101B with your FT-101B and open up a new world of operating flexibility. DX'ers will particularly appreciate this combination. The FV-101B features the same factory sealed, solid state VFO with 1 KHz readout that is found in the FT-101E. A dual VFO adaptor is built into the FT-101E to accept a simple, plug-in cable. The FV-101B includes a fixed channel oscillator for up to four crystal controlled channels on any band - 160 thru 10 meters.

## Specifications

**Frequency Range:** 8.7 to 9.2 MHz.

**Frequency Stability:** Within 100 Hz in any 30 minute period after warm-up.

**Power Source:** FT-101E.

**Size:** 210(W)x153(H)x285(D)m/m.

**Weight:** 3.5 Kg.

## Optional Accessories

- 6 kHz AM FILTER XF30B
- 600 Hz CW Filter XF30C

An optional CW filter providing 600 Hz at 6 dB/1.2 kHz at 60 dB skirt selectivity for enjoyable CW operation. The XF-30C is easily installed in minutes.

- Mobile Mounting Bracket  
MMB-1

The MMB-1 is a floor type mount designed for an "over the hump" installation. It mounts directly to floor and enables the transceiver to be positioned at an optimum angle for easy viewing and operation.

- RF Speech Processor for FT-101EE  
RFP-102

## ● Speaker/Phone Patch Console SP-101PB

To complement your station, add the SP-101PB speaker/phone patch console. It features a shaped response speaker from 300 to 3000 Hz - ideal for quality communications reproduction. Built into this matched unit is a hybrid phone patch with individual gain controls for receiver-to-line and line-to-transmitter levels. A VU meter monitors the phone line audio level. Full VOX phone patch operation is possible with SP-101PB. Add this exciting accessory to your station today.

## Specifications

**Receiver Input Impedance:** 4 or 600 Ohm.

**Output Impedance:** 600 Ohm or high impedance.

**Size:** 210(W)x153(H)x285(D)m/m.

**Weight:** 3 Kg.

- Cooling Fan  
FA-9

The FA-9 is a low noise, muffin type fan which easily mounts on the rear panel of the FT-101E. Operating voltage is supplied through a plug-in connector and the fan functions in both mobile and base installations.

- Speaker Console  
SP-101B

Same as SP-101PB above but without hybrid phone patch.

- Dynamic Base Microphone  
YD-844

# All Solid-State/Digital Readout FT-301D



## ● 160 thru 10 Meter HF Transceiver

YAESU's years of experience in the amateur field are exemplified by the FT-301D. The FT-301D features the latest in solid state technology incorporating time proven, plug-in "computer type" modules for unparalleled reliability and maintenance. A wide band tuning system with preset pass-band tuning eliminates final amplifier tuning for band change. The FT-301D transceiver is the perfect mobile rig. To go mobile, simply connect to a 12 Volt terminal, hook

up the antenna and you are on the air without any warm-up time. Furthermore, no bulky or heavy power supply is necessary and the power consumption is less than your dashlight for standby. A complete line of compatible accessories, such as the AC power supply with built-in automatic CW identifier, is available for flexible station design. This is a professionally engineered transceiver for the uncompromising radio amateur.

## Specifications

### GENERAL

**Frequency Range:** 1.8–2.0 MHz, 3.5–4.0 MHz, 7.0–7.5 MHz, 14.0–14.5 MHz, 21.0–21.5 MHz, 28.0–29.9 MHz, WWV 5 MHz (receive only).

**Mode:** SSB (selectable USB or LSB), CW, AM or FSK.

**Frequency Stability:** Within 100 Hz during any 30 minute period after warm-up. Not more than 100 Hz with 10% line voltage variation.

**Calibration Accuracy:** 2 kHz maximum after 100 kHz calibration.

**Backlash:** Not more than 50 Hz.

**Antenna Impedance:** 50 ohm unbalanced nominal.

**Circuitry:** 24 FETs, 47 Transistors, 27 Integrated Circuits and 94 Diodes.

**Power Requirement:** 13.5 V DC nominal, 1.1 A (digital type) and 0.9 A (dial type) for receive and 21 A for transmit.

**Size:** 280(W) x 125(H) x 370(D) m/m

**Weight:** Approx. 9 kg.

### RECEIVER

**Sensitivity:** 0.25  $\mu$ V for 10 dB Noise plus Signal to Noise Ratio on 14 MHz.

**Selectivity:** 2.4 kHz nominal bandwidth at 6 dB down, 4.0 kHz at 60 dB down on SSB, CW and AM. 600 Hz nominal bandwidth at 6 dB down, 1.2 kHz at 60 dB down with optional CW filter, 6 kHz nominal bandwidth at 6 dB down, 12 kHz at 60 dB down with optional AM filter.

**Harmonic & Other Spurious Response:** Image Rejection better than 50 dB. Internal Spurious Signal below 1  $\mu$ V equivalent to antenna input.

**Automatic Gain Control:** AGC threshold nominal 3  $\mu$ V. Attack time is 8 milli-seconds and release time is selected from 3500, 1500 and 200 milli-

seconds on front panel.

**Audio Noise Level:** Not less than 40 dB below 1 Watt.

**Audio Output:** 3 Watts to internal or external speaker at 4 ohm impedance.

**Audio Distortion:** Less than 10% at 3 Watts output.

### TRANSMITTER

**Input Power:** 200 Watts PEP on SSB, 200 Watts on CW at 50% duty cycle and 50 Watts on AM and FSK. (Slightly lower on 10 meter and 160 meter bands.)

**Microphone:** 500 ohm dynamic type.

**Carrier Suppression:** -40 dB.

**Sideband Suppression:** -50 dB.

**Spurious Radiation:** -40 dB.

**Distortion Products:** -31 dB.

**Frequency Response:** 300 to 2700 Hz  $\pm$ 3 dB.

**Final Transistor:** S2535 x 2.



● Conventional Dial Type FT-301



FP-301

FT-301

**Features**

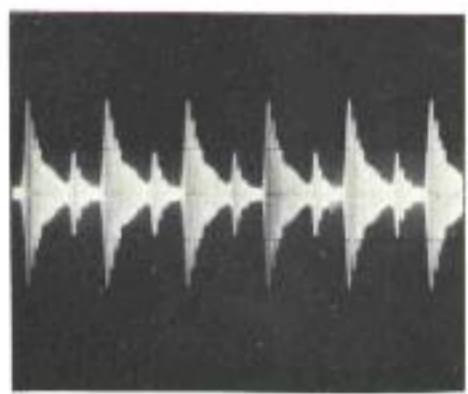
- \* ALL Solid State – 27 IC, 47 TR, 24 FET and 94 diode
- \* ALL Band – 160 through 10 meter plus receive only for WWV/JJY and Aux Band
- \* ALL Modes – SSB (USB/LSB selectable) CW, AM and FSK
- \* Digital Dial Readout – by large LED diode
- \* 200 Watts PEP INPUT for SSB, CW and 50 Watts for AM, FSK
- \* RF Feedback – for clean signal
- \* Rejection Tuning – tunable crystal filter rejection
- \* Effective Noise Blanker – for elimination of noise spikes
- \* RF Speech Processor – for increased talk power
- \* Built-in fully adjustable VOX
- \* Automatic break-in CW operation with sidetone
- \* Selectable 25 kHz/100 kHz calibrator,  $\pm 5$  kHz TX/RX or RX clarifier with separate ON-OFF switch
- \* Selectable, amplified AGC system – SLOW, MEDIUM and FAST
- \* Built-in internal crystal control (11 channels) provision and dual VFO adapter
- \* Adjustable carrier level for tune-up
- \* Triple protection circuits for PA stage and warning system
- \* 8-pole SSB filter for unparalleled selectivity
- \* Built-in speaker
- \* Compact size, light weight
- \* Complete line of compatible accessories for flexible station design

**RF. Processor**

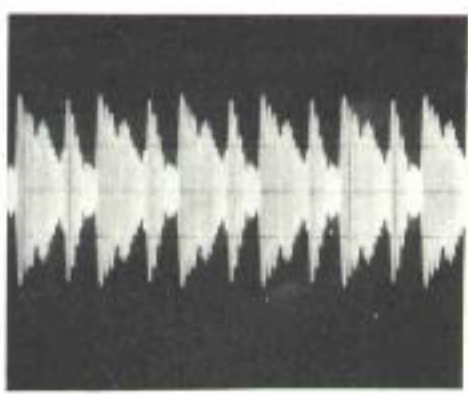
The RF Processor increases talk power to cut through the pile-ups without addition of a linear amplifier.

**Tunable Rejection Tuning**

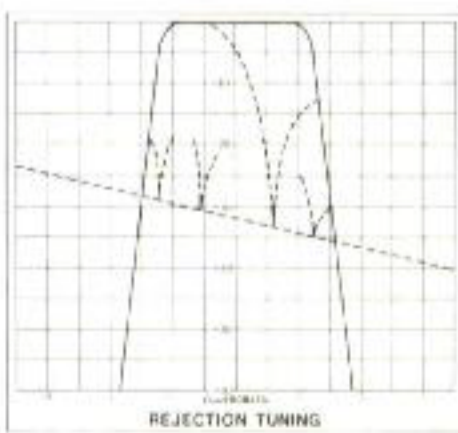
The tunable IF rejection filter utilizes sharp resonance characteristics of a crystal filter. The resonance frequency is tunable over the entire IF range to reject any interferences close to or inside the IF pass-band.



RF Processor "OFF"



RF Processor "ON"



# FT-301D Accessories Everything You Want in a Complete



YAESU's years of experience in the radio amateur field are exemplified in the FT-301D series. The FT-301D can be interconnected to its matching power supply and external VFO unit. This feature provides you with a completely integrated home station with transceive operation on either VFO split frequency, or, crystal controlled operation with a flip of the switch. The FP-301D with built-in speaker is a complete AC power supply and can be used for any of the

## ● AC Power Supply FP-301D

The FP-301D is an AC power supply in a matching cabinet with speaker, digital clock and automatic identifier.

A built-in digital clock displays the time in hours, minutes and seconds and is synchronized to the AC supply frequency, 50 Hz or 60 Hz. The frequency can be selected by changing the internal connection. The display can be selected for either a 24-hour or 12-hour system with a front panel switch. This power supply comes complete with all cables and plugs prewired, ready to connect to the FT-301D transceiver.

A matching monitorscope, YO-301, monitors your transmitted signal keeping it clean. Automatic identifier optional.

## Specifications

**Input Voltage:** 100/110/117/200/220/234 V AC, 50/60 Hz.

**Output Voltage:** 13.5 Volts regulated.

**Output Current:** Max. 25 Amps.

**Identification:** Call sign is programmable and code speed is adjustable from front panel.

**Protection:** Overload current limiter.

**Size:** 212(W) x 125(H) x 290(D) m/m.

**Weight:** Approx. 10 kg.

## ● AC Power Supply FP-301

An economical power supply, FP-301, is also available. This power supply does not contain either a clock or an automatic identifier.

following supply voltages: 100/110/117/200/220/234 Volts, 50/60 Hz. A digital clock and automatic call sign identifier are an integral part of the power supply. The time display can be selected for either a 24-hour or 12-hour system with a flip of the switch on the front panel. A programmable identifier transmits your call sign in morse code automatically every ten minutes.

## ● External VFO FV-301

The FV-301 external VFO is designed for split frequency control or crystal controlled operation of the FT-301D transceiver. The FV-301 features extremely stable, solid state VFO with 1 kHz readout. A dual VFO adapter is built-in the FT-301D to accept a simple, plug-in cable connection. It matches the FT-301D in height, depth and styling. A precise ball drive gear assembly provides velvet smooth tuning over the 500 kHz segment of the band with 1 kHz increment. The FV-301 includes a fix channel oscillator for up to eleven crystal controlled channels on any band—160 through 10 meters.

## Specifications

**Frequency Range:** 5 to 5.5 MHz.

**Stability:** Within 100 Hz in any 30 minute period after warm-up.

**Number of Crystal Channels:** 11

**Power Source:** FT-301D or FT-301

**Size:** 212(W) x 125(H) x 290(D) m/m.

**Weight:** Approx. 3.5 kg.

# Home Station Design



## ● Monitor Scope YO-301

You can maintain the cleanest sounding signal on the band with the YO-301 monitorscope. Compatible with virtually all transmitters and receivers, the YO-301 matches the FT-301D transceiver in size and styling. It features wide range for all mode monitoring including an RTTY signal. A built-in 1800/1900 Hz two tone generator adds to the versatility of this monitorscope. As well as being a monitorscope, the YO-301 fully functions as an oscilloscope and can be used for many measurements in electronics.

## Specifications

### VERTICAL

- RF Monitor  
Frequency Range: 1.8 – 54 MHz  
Input Impedance: 50 – 75 ohms  
Power: 10 – 500 Watts  
RF Attenuator: 5 steps  
Insertion Loss: less than 0.5 dB
- IF Monitor  
Frequency Range: 455kHz – 10.7 MHz  
Sensitivity: 20 mV/Div

### VERTICAL INPUT

Sensitivity: 20 mV/Div  
Frequency: 2 Hz – 4 MHz (-3 dB)  
Input Attenuator: X1, X10, X100  
Input Impedance: 1M ohms 50 PF  
Max Voltage: 600 Volts P-P

### HORIZONTAL

Sensitivity: 300 mV/Div  
Input Attenuator: Variable  
Frequency Response: 10 Hz – 250 kHz  
Input Impedance: 100K ohms 50 PF  
Max Voltage: 30 Volts P-P

### TWO TONE GENERATOR

Frequency: 1500 Hz and 1900 Hz  
Output Level: 50 MV P-P

### GENERAL

Power Requirement: 100/110/117/200/220/234 V AC, 50/60 Hz, 15 VA  
Size: 212(W) x 125(H) x 290(D) m/m.  
Weight: Approx. 6 kg.

## ● Optional Accessories

- 600 Hz CW Filter  
XF-90C
- AM Filter  
XF-90B
- Mobile Mounting Bracket

# Deluxe "101" Series. The Ultimate Base FR-101S Receiver



## ● Solid State Receiver with Total Spectrum Coverage 160 thru 2 Meter plus Provision for Major Short Wave Broadcast Bands

Advanced communications technology now brings you a total coverage, solid-state communications receiver. The FR-101S has the flexibility that even the most demanding amateur desires with provision for all mode reception on twenty-one 500 kHz amateur and shortwave bands from 160 thru 2 Meters. This versatile receiver is capable of transceive or external VFO control with the matching

FL-101 transmitter or FT-101E transceiver. New, solid-state technology, with features such as a double-balanced mixer, offer unparalleled performance and rejection of cross-modulation and intermodulation interference. Build your total performance base station with the addition of the FR-101S communications receiver.

### Features

- \* Total coverage capability: 160 thru 2 meters plus major short wave broadcast bands
- \* Provision for all mode reception: SSB, CW, AM, RTTY, and FM
- \* Complete transceive capability with all 101 series equipment
- \* Reliable, plug-in circuit boards for service simplicity

- \* Selectable fast or slow AGC
- \* Built-in, threshold adjustable, noise blanker
- \* Better than 1 kHz readout on all bands
- \* Fixed channel, crystal control operation
- \*  $\pm 5$  kHz clarifier
- \* Built-in calibrator 25 or 100 kHz (selectable)
- \* Indicator lights for internal VFO and clarifier operation
- \* Built-in AC power supply and 12 V DC operation.

### Specifications

**Frequency Range:** 160 M 1.8–2.0 MHz, 80 M 3.5–4.0 MHz, 60 M 4.5–5.0 MHz\*, 40 M 7.0–7.5 MHz, 31 M 9.5–10.0 MHz\*, 25 M 11.5–12.0 MHz\*, 20 M 14.0–14.5 MHz, 19 M 15.0–15.5 MHz\*, 16 M 17.5–18.0 MHz\*, 15 M 21.0–21.5 MHz, 13 M 21.5–22.0 MHz\*, 11 M 25.5–26.0 MHz\*, 10A 28.0–28.5 MHz, 10B 28.5–29.0 MHz, 10C 29.0–29.5 MHz\*, 10D 29.5–29.9 MHz\*, VHF6 M 50.0–52.0 MHz\* or 52.0–54.0 MHz\*, VHF2 M 144–146 MHz\* or 146–148 MHz\*, and additional four bands of 500 kHz segment within 4.0–4.5 MHz\*, 5.0–5.2 MHz\*,

7.5–9.0 MHz\* and 22.0–27.0 MHz\*.  
**Mode:** Selectable USB, LSB, CW, AM, FM\* or RTTY\*

**Frequency Stability:** Within 100 Hz during any 30 minute period after warm-up. Not more than 100 Hz with 10% line voltage variation.

**Calibration Accuracy:** 1 kHz maximum after 100 kHz calibration.

**Backlash:** Not more than 50 Hz.

**Antenna Impedance:** 50 Ohm unbalanced nominal.

**Circuitry:** 20 Transistors, 12 FET, 4 Integrated Circuits and 33 Diodes.

**Power Requirement:** 100/110/117/200/220/234 V AC, 50/60 Hz, or 13.5 V DC nominal.

**Sensitivity:** 0.3  $\mu$ V for 10 dB Noise plus Signal to Noise Ratio on 14 MHz for SSB and CW. 1  $\mu$ V for AM on 14 MHz. 12 dB SINAD for FM reception.

**Selectivity:** 2.4 kHz nominal bandwidth at 6 dB down, 4.0 kHz at 60 dB down on SSB, CW and RTTY. 600 Hz nominal bandwidth at 6 dB down, 1.5 kHz at 60 dB down with optional CW filter. 6.0 kHz nominal bandwidth at 6 dB down, 12 kHz at 60 dB down with optional AM filter. 20 kHz nominal bandwidth at 6 dB down, 45 kHz at 60 dB down with optional FM filter.

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# Station Combination FL-101 Transmitter



## • Solid State 160 thru 10 Meter Transmitter

Here is the ideal companion designed to compliment the FR-101S and offer total base station performance and versatility. The latest, solid-state techniques and circuitry are utilized throughout this advanced transmitter. The FL-101 features a new, patented, variable temperature compensated VFO to give unmatched stability with better than 1 kHz readout and zero dial backlash on all bands.

### Features

- \* 160 thru 10 Meter coverage with 2 auxiliary bands
- \* All mode operation: SSB, CW, AM and FSK
- \* 240 Watts PEP
- \* Reliable, plug-in circuit boards for service simplicity
- \* Built-in final cooling fan

### Specifications

**Frequency Range:** 1.8–2.0 MHz, 3.5–4.0 MHz, 7.0–7.5 MHz, 14.0–14.5 MHz, 21.0–21.5 MHz, and 28.0–29.9 MHz. Two auxiliary 500 kHz segments are available except for IF and VFO frequency range.

**Mode:** Selectable USB, LSB, CW, AM or FSK. (Shift frequency of FSK is set to 170 Hz and can be modified for other frequencies.)

**Frequency Stability:** Within 100 Hz during any 30 minute period after warm-up. Not more than 100 Hz with 10% line voltage variation.

**Calibration Accuracy:** 2 kHz maximum after 100 kHz calibration.

**Backlash:** Not more than 50 Hz.

**Antenna Impedance:** 50 Ohm unbalanced nominal.

**Circuitry:** 12 Transistors, 6 FET, 4 Integrated Circuits, 28 Diodes and 3 Tubes.

**Power Requirement:** 100/110/117/200/220/234 V AC, 50/60 Hz, 200 Watts.

**Input Power:** 240 Watts PEP on SSB, 180 Watts on CW at 50% duty cycle and 80 Watts on AM and RTTY. (Slightly lower on 10 meter.)

**Carrier Suppression:** –40 dB.

**Sideband Suppression:** –40 dB.

**Harmonic & Other Spurious Radiation:** Less than 40 dB.

**Distortion Products:** –30 dB.

**Noise Level:** 40 dB below single tone carrier.

**Audio Input:** 50 K Ohm dynamic microphone or SP-101PB phone patch.

**Frequency Response:** 350 to 2700 Hz  $\pm$  3 dB.

**CW Sidetone:** Provision for monitoring keying in receiver.

**Size:** 340(W) x 153(H) x 285(D) m/m.

**Weight:** 14 Kg.

### (FR-101S Specifications)

**Harmonic & Other Spurious Response:** Image Rejection better than 60 dB. Internal Spurious Signal below 1  $\mu$ V equivalent to antenna input.

**Automatic Gain Control:** AGC threshold nominal 1  $\mu$ V. Selectable AGC

time constant, fast or slow. Fast attack time 3 milli-second and slow attack time 4 milli-second. Fast release time 0.5 second and slow release time 2 seconds.

**Audio Noise Level:** Not less than 40 dB below 1 Watt.

**Audio Output:** 2 Watts at 4 Ohm impedance.

**Audio Distortion:** Less than 10% at 2 Watts output.

**Size:** 340(W) x 153(H) x 285(D) m/m.

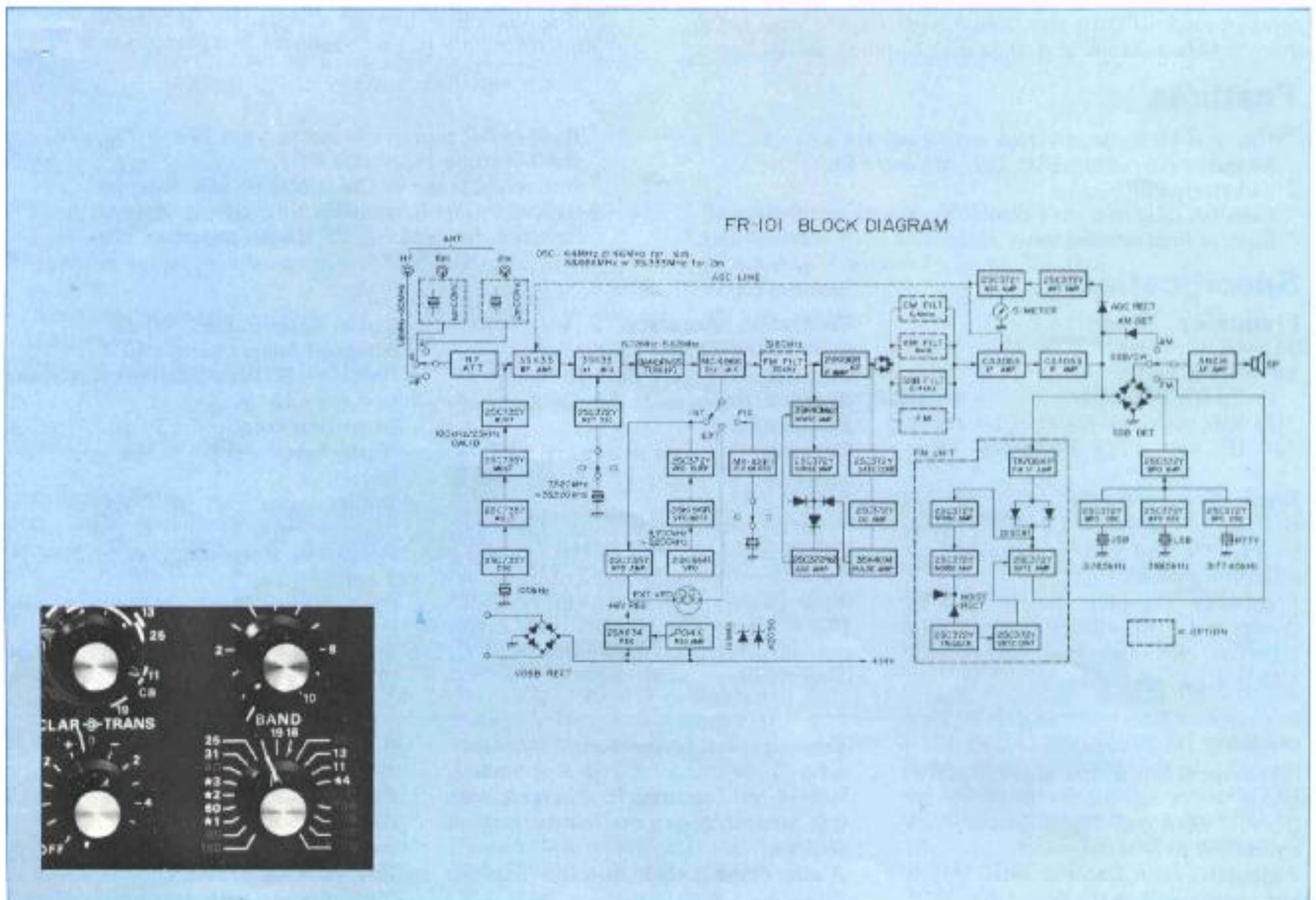
**Weight:** 9 Kg.

(\* crystals and VHF converters optional)

# Digital Readout Deluxe Receiver FR-101-Digital



- Frequency Readout Direct to 100Hz. All Specifications are Identical to the FR-101S.
- Transceive Operation with FT-101E or FL-101.



# General Coverage Communications Receiver FRG-7



## ● 0.5MHz thru 29.9MHz Coverage With 10kHz Readout

The model FRG-7 is a precision built high performance communication receiver designed to cover the band from 0.5 MHz – 29.9 MHz. Its state of art technology offers an unprecedented level of versatility. The Wadley Loop System (drift cancellation circuit) coupled with a triple

conversion super heterodyne system guarantees an extremely high sensitivity and excellent stability. It provides complete satisfaction to amateurs as well as BCL's with superb performance and many features such as RF attenuator, selectable tone, and automatic noise suppression circuit.

### Features

- \* **Wide Versatility** – The receiver can be used for listening to various types of communications, commercial radio stations on medium wave, international short wave, amateur bands and citizen band.
- \* **Exceptional Sensitivity and Excellent Stability** – The Wadley Loop System coupled with a triple conversion super heterodyne system guarantees an extremely high sensitivity and excellent stability. The dial indicator with 1 MHz VFO range will enable you to enjoy simplified tuning.
- \* **5 kHz Direct Dial Readout** – The extremely stable VFO equipped with precision dial mechanism permits 5 kHz direct dial readout, thus permitting presetting of dial for your desired station even when not on the air with assurance of "on the target" reception.
- \* **RF Attenuator** – The selectable three position RF attenuator is effective when tuning local or high powered stations. Tuning for a weak desired station adjacent to a strong unwanted signal, proper selection of DX or LOCAL position will help reduce the interference considerably.
- \* **Automatic Noise Suppression Circuit** – When impulse type noise is experienced the AM/ANL position will activate the automatic noise suppression circuit which effectively eliminates all pulse type noise, permitting you to enjoy noise free reception.
- \* **Three Position Tone Selector** – The audio spectrum in SSB communication is limited within the range of 300-2700 Hz. Broadening the bandwidth of the receiver will introduce more noise or interference unnecessarily. The tone selector will limit the audio spectrum and its selectable positions will increase readability of the signal being received. It offers three positions: LOW (high cut), NORMAL, and NARROW (high and low cut).
- \* **Accepts Three Different Types of Power Sources** – The receiver can be operated on AC, DC or internal battery supply. When more than two power supplies are connected, it automatically selects the most economical source. The light switch will conserve energy when operated on batteries. The line cord retainer comes in handy in portable operation.

### Specifications

**Frequency Range:** 0.5–29.9 MHz general coverage in four bands.

**Mode:** SSB (selectable USB or LSB), AM \*AM/ANL) or CW.

**Frequency Stability:** Within 500 Hz during any 30 minute period after warm-up.

**Antenna Impedance:** High impedance for 0.5–1.6 MHz, 50–75 ohm unbalanced for 1.6–29.9 MHz.

**Circuitry:** 13 Transistors, 9 FETs, 2 Integrated Circuits and 16 Diodes.

**Power Requirement:** 100/110/117/200/220/234 V AC, 50/60 Hz or 13.5 V DC negative ground. Battery: Type UM-1x8.

**Sensitivity:** 0.25  $\mu$ V for 10 dB Noise plus Signal to Noise Ratio for SSB and CW, 0.7  $\mu$ V for 30% modulated AM at 10.5 MHz.

**Selectivity:**  $\pm$ 3 kHz nominal bandwidth at 6 dB and  $\pm$ 7 kHz at 60 dB down.

**Output Impedance:** 4 ohms.

**Audio Output:** More than 2 Watts.

**Audio Distortion:** Less than 10% at 2 Watts output.

**Size:** 340(W) x 153(H) x 285(D) m/m.

**Weight:** 7 kg without batteries.

# VHF Mobile/Base Station FT620B 6 Meter Transceiver



## ● VHF DX is Now Achievable with the FT620B VHF SSB Transceiver

Join the action and DX on 6 Meters with our new, all solid state, 10 Watt SSB, CW and AM transceiver. The FT620B features, in one compact unit, complete band coverage in eight, 500 kHz segments with 1 kHz VFO readout across the entire band. Provision for up to four crystal controlled channels in each of the eight band segments, a receiver

offset clarifier, and an effective noise blanker; all add up to total operating flexibility. A built-in AC and DC power supply adds to the portability of the FT620B transceiver. Add up all the features, and you have another total performance transceiver for the leader in amateur radio equipment.

## Specifications

### GENERAL

**Frequency Range:** 50.0–50.5 MHz, 50.5–51.0 MHz, 51.0–51.5 MHz, 51.5–52.0 MHz, 52.0–52.5 MHz, 52.5–53.0 MHz, 53.0–53.5 MHz and 53.5–54.0 MHz. (For 52.0–54.0 MHz crystals are optional.)

**Mode:** Selectable USB, LSB, CW or AM.

**Frequency Stability:** Within 100 Hz during any 30 minute period after warm-up. Not more than 100 Hz with 10% line voltage variation.

**Calibration Accuracy:** 2 kHz maximum after 100 kHz calibration.

**Backlash:** Not more than 50 Hz.

**Antenna Impedance:** 50 Ohm unbalanced nominal.

**Circuitry:** 35 Transistors, 7 FET, 2 Integrated Circuits and 40 Diodes.

**Power Requirement:** 100/110/117/200/220/234 V AC, 50/60 Hz, 60 Watts maximum, or 13.5 V DC nominal, 0.3 A for receive and 2 A for transmit.

**Size:** 280(W) x 125(H) x 295(D) m/m.  
**Weight:** 8 Kg.

### RECEIVER

**Sensitivity:** 0.5  $\mu$ V for 10 dB Noise plus Signal to Noise Ratio on SSB and CW. 1  $\mu$ V on AM.

**Selectivity:** 2.5 KHz nominal bandwidth at 6 dB down, 4.1 kHz at 60 dB down on SSB and CW. 6 kHz nominal bandwidth at 6 dB down, 10 kHz at 60 dB down on AM.

**Harmonic & Other Spurious Response:** Image Rejection better than 60 dB. Internal Spurious Signal below 1  $\mu$ V equivalent to antenna input.

**Automatic Gain Control:** AGC threshold nominal 1  $\mu$ V. Attack time 5 millisecond and release time 1.5 seconds.

**Audio Noise Level:** Not less than 40 dB below 1 Watt.

**Audio Output:** 2 Watts to internal or external speaker at 4 Ohm impedance.

**Audio Distortion:** Less than 10% at 2 Watts output.

### TRANSMITTER

**Input Power:** 24 Watts PEP on SSB, 20 Watts on CW at 50% duty cycle and 8 Watts on AM.

**Microphone:** 50 K Ohm dynamic type.

**Carrier Suppression:** -40 dB.

**Sideband Suppression:** -40 dB.

**Spurious Radiation:** -60 dB.

**Distortion Products:** -25 dB.

**Frequency Response:** 350 to 2700 Hz.



# FT-221R 2 Meter Transceiver



## ● Solid State Ultimate 2 Meter Transceiver with Versatile SSB/FM/CW/AM Operation

Here is a compact, versatile transceiver designed for the active 2 meter enthusiast. The FT-221R features all mode operation—SSB/FM/CW/AM—with repeater offset capability. Advanced phase lock loop circuitry offers unsurpassed stability and clean spurious free signals. Modular, computer type construction offers reliability and ease of service. Pre-

set pass band tuning provides the optimum selectivity and performance needed on today's active 2 meter band. Join the fun on FM, DX, or OSCAR, with the FT-221R transceiver. Another winner from the world's leader in amateur communications equipment.

### Features

- \* Complete 144-148 MHz coverage in 8 band segments
- \* Dual rate, concentric VFO dial drive with better than 1 kHz readout
- \* Built-in AC & DC power supplies
- \* SSB/CW/FM/AM operation
- \* Selectable  $\pm 600$  kHz repeater offset
- \* Built-in VOX and break-in CW
- \* External tone input connector
- \* Built-in 100 kHz calibrator
- \* Built-in effective noise blanker
- \* Three way metering: S meter, power output, and FM discriminator
- \* 11 crystal channels per band segment = Total 88 channel
- \* SSB output 12 watts PEP  
FM/CW output 14 watts  
AM output 2.5 watts
- \* Built-in speaker

### Specifications

#### GENERAL

**Frequency Range:** 144.00 to 148.00 MHz in eight 500 kHz segments.

**Mode:** SSB (selectable USB or LSB), AM, FM or CW.

**Frequency Stability:** Within 100 Hz during any 30 minute period after warm-up. Not more than 20 Hz with 10% line voltage variation.

**Calibration Accuracy:** 1 kHz maximum after 100 kHz calibration.

**Backlash:** Not more than 50 Hz.

**Antenna Impedance:** 50 ohm unbalanced nominal.

**Power Requirement:** 100/110/117/200/220/234 V AC, 50/60 Hz, 100 VA maximum or 13.5 V DC, 3A

transmit maximum (11.5–16.5 V DC).

**Size:** 280(W) x 125(H) x 295(D) m/m.

**Weight:** 8.5 kg.

#### RECEIVER

**Sensitivity:** 0.5  $\mu$ V for 10 dB Noise plus Signal to Noise Ratio on SSB/CW. 1.0  $\mu$ V for 10 dB Noise plus Signal to Noise Ratio with 400 Hz 30% modulation on AM. 0.75  $\mu$ V for 20 dB quieting on FM.

**Selectivity:** 2.4 kHz nominal bandwidth at 6 dB down, 4.1 kHz at 60 dB down on SSB/CW/AM.  $\pm 6$  kHz nominal bandwidth at 6 dB down,  $\pm 12$  kHz at 60 dB down on FM. (8 kHz or 15 kHz filter is available on request.)

**Harmonic & Spurious Response:** Image Ratio better than 60 dB.

**Audio Output:** 2 Watts to internal or external speaker at 4 ohm impedance.

**Squelch Threshold:** Less than 0.3  $\mu$ V.

**I.F. Frequencies:** SSB/AM/CW 10.7 MHz, FM 10.7 MHz and 455 kHz.

#### TRANSMITTER

**Spurious Radiation:**  $-60$  dB.

**Frequency Response:** Balanced SSB 300 to 2700 Hz  $\pm 3$  dB. Low power AM better than 60%. Variable reactance FM  $\pm 5$  kHz maximum.

**Carrier Suppression:**  $-50$  dB.

**Sideband Suppression:**  $-50$  dB.

# VHF Transverter FTV-650B



# FTV-250



## ● 6 Meter Transverter

Join the VHF action with the FTV-650B and FTV-250. This matching, economical addition offers VHF transmitter and receiver. Why buy a complete separate rig when you

## ● 2 Meter Transverter

can utilize much of your HF transceivers—coupled with these functional accessories?

## Specifications

### GENERAL

**Frequency Range:** 50~54MHz.  
**Mode:** SSB, AM, CW and FM  
when used with 28MHz output FM transceiver  
**Size:** 210(W) x 153(H) x 285(D) m/m.  
**Weight:** 4kg.

### RECEIVER

**Sensitivity:** 0.5 $\mu$ V for 10dB Noise plus Signal to Noise Ratio when used with our transceiver.  
**Input Impedance:** 50 to 75 Ohms.  
**Output Frequency:** 28 to 30MHz.  
**Harmonic & Other Spurious Response:** Image Rejection better than 50dB. Internal Spurious Signal below 1 $\mu$ V equivalent to antenna input.

### TRANSMITTER

**Input Power:** 50 Watts PEP on SSB, 50 Watts on CW at 50% duty cycle, 10 Watts on AM and FM.  
**Drive Requirement:** 3V RMS at 28 to 30MHz.

## Specifications

### GENERAL

**Frequency Range:** 144-148MHz.  
**Mode:** SSB, AM, CW and FM.  
when used with 28MHz output FM transceiver  
**Size:** 210(W) x 153(H) x 285(D) m/m.  
**Weight:** 6kg.

### RECEIVER

**Sensitivity:** 0.5 $\mu$ V for 20dB Noise plus Signal to Noise Ratio when used with our transceiver.  
**Input Impedance:** 50 to 75 Ohms.  
**Output Frequency:** 28 to 30MHz.  
**Harmonic & Other Spurious Response:** Image Rejection better than 50dB. Internal Spurious Signal below 1 $\mu$ V equivalent to antenna input.

### TRANSMITTER

**Output Power:** 12 Watts PEP on SSB, 10 Watts on CW at 50% duty cycle, 4 Watts on AM and FM.  
**Drive Requirement:** 3V RMS at 28 to 30MHz.

# Measuring Equipment

## YC-500E

- YC-500S and YC-500J are available at lower prices.



### ● 500MHz Frequency Counter

The YC500 series is designed for the discriminating Amateur-Experimenter who desires accuracy at an affordable price. The YC-500E can provide 0.02 ppm ( $\pm 1$  count) accuracy (using a dual range 8 digit readout) up to 500 Mhz, with readout in kHz or MHz, selectable with a front panel switch.

Compact and extremely flexible in application, the unit is complete with easy to read display. The unit will function on 110 VAC 60 Hz for bench use, or on 12VDC. Double sided glass epoxy circuit design assures stable and reliable operation for many years to come. A "must" item for 220, 450 Mhz operators!

### Specifications

- Frequency Range:** Input 1 – 10 Hz to 50 MHz  
Input 2 – 50 MHz to 500 MHz
- Accuracy:** YC-500-E model – 0.02 PPM  
YC-500-S model – 1 PPM  
YC-500-J model – 10 PPM
- Display Digit:** 6 digits
- Display Time:** 0.1 or 2 seconds
- Counting Time:** 0.001 or 1 second
- Input Voltage:** Input 1 – 25 mV to 20 V RMS  
Input 2 – 100 mV to 2 V RMS
- Input Impedance:** Input 1 – HIGH 1 Meg, LOW 50 ohms  
Input 2 – 50 ohms
- Input Capacitance:** Input 1 – Less than 20 PF  
Input 2 – Less than 20 PF
- Operating Temperature:** 0 to 40°C
- Power Requirement:** AC – 100/110/117/200/220/234 V AC, 50/60Hz  
DC – 12 to 14.5 volts
- Size:** 220(W) x 80(H) x 235(D) m/m
- Weight:** Approx. 3.2 kg

## YO-100



### ● Monitor Scope

Now, you, too, can maintain the cleanest sounding signal on the band with the YO-100 Monitor Scope. Compatible with virtually all transmitters and transceivers, the YO-100 features wide range inputs for all mode monitoring - even RTTY. A built-in 1500/1900 Hz tone generator adds to the versatility of this station accessory. A full complement of front panel controls allows operator control of all key adjustments. Complete your station with the versatile YO-100 monitor scope.

### Specifications

#### VERTICAL

- Sensitivity:** 200 mV P-P/cm.
- Frequency Response:** 10Hz to 40kHz  $\pm 3$ dB 3180kHz (455 kHz or 9 MHz inputs optional). Direct 10Hz to 60MHz.
- Input Impedance:** 500 K Ohm.

#### HORIZONTAL

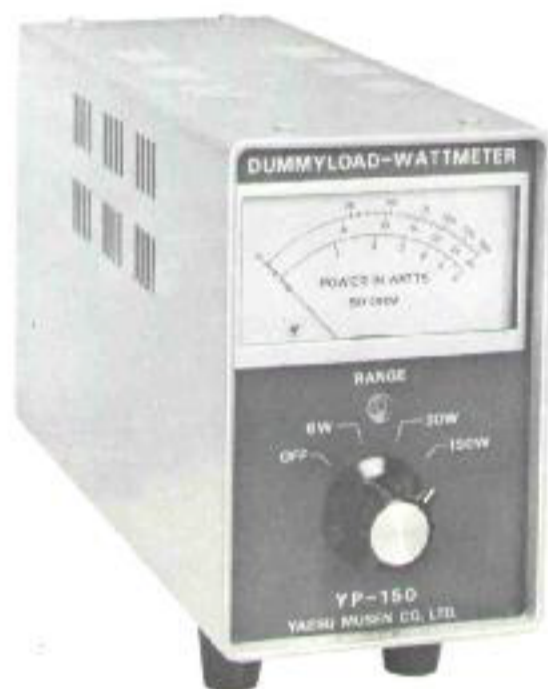
- Sensitivity:** 300 mV/cm.
- Frequency Response:** 10 Hz to 16 KHz  $\pm 3$  dB.
- Input Impedance:** 500 K Ohm.
- Sweep Frequency:** 10 Hz to 10 KHz.

#### TWO TONE GENERATOR

- Frequency:** 1500 Hz and 1900 Hz.
- Output Level:** 50 mV.
- Power Requirements:** 100/110/117/200/220/234 V AC 50/60 Hz.
- Size:** 210(W)x150(H)x290(D) m/m.
- Weight:** 6 Kg.

# Accessories

## YP-150



### ● Dummy Load/Power Meter

The Model YP-150 can be used as dummy load and power meter within the frequency range of 1.8MHz to 200MHz. Three switch selected scales assure accurate power measurement in high and low power range. Built-in fan cools unit for stable measurement.

### Specifications

**Frequency Range:** 1.8MHz~200MHz  
**Impedance:** 50 ohm unbalanced  
**Power Scale:** 0~6 watts, 0~30 watts, 0~150 watts  
**VSWR:** Less than 1.2 at 145MHz  
**Maximum Error:** Within 10% of maximum scale  
**Size:** 104(W) x 153(H) x 280(D) m/m  
**Weight:** 2kg.

## YC-601



### ● Digital Display Unit for 101 & 401 Series

The Model YC-601 displays actual transmit and receive frequencies on six bright, green coloured digital display tubes.

All amateur bands are switch selected for complete frequency readout with 100Hz accuracy.

The power supply is built-in.

Connection cable is supplied with the unit.

### Specifications

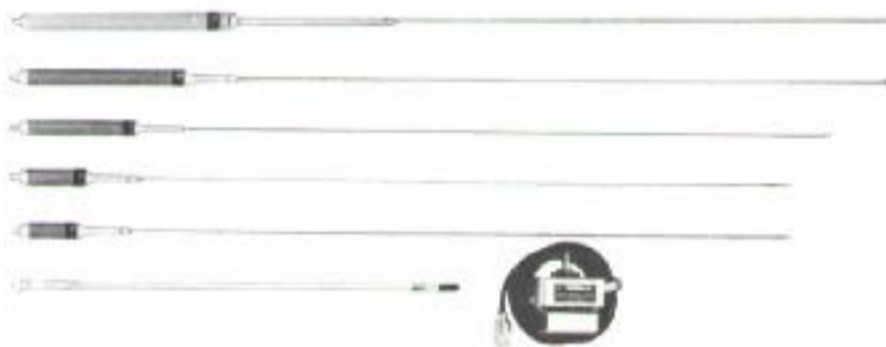
**Display:** 6 digits, 100Hz Readout  
**Clock Oscillator:** 1.31072MHz  
**Gate Time:** 0.1 sec.  
**Ambient Temperature:** 0°C~40°C  
**Power Source:** 100/110/117/200/220/234V AC 50/60Hz  
**Power Consumption:** Approx. 10VA  
**Size:** 220(W) x 80(H) x 235(D) m/m  
**Weight:** Approx. 2.5kg.

# World Clock QTR-24



The YAESU world clock is a unique timepiece which features world time readout. At a glance, the time in any principal city or time zone can be simultaneously coordinated with local time on a 24-hour basis. After the initial setting, as the clock runs, the Time Zone Hour Disc advances automatically, thus retaining the correct setting and showing correct time on all indicated locations without any further adjustments. The clock is specially designed to withstand shock and will keep correct time from various angles. The strong self-start mechanism will start instantly upon insertion of battery. It will run for a year on one UM-2 1.5V battery.

# Mobile Antenna



- RSL-3.5 (3.5 MHz Roof-side)
- RSL-7 (7 MHz Roof-side)
- RSL-14 (14 MHz Roof-side)
- RSL-21 (21 MHz Roof-side)
- RSI-28 (28 MHz Roof-side)
- RSE-M-2 (Element & Base)
- RSL-145 (145 MHz Roof-side)

# Microphone



YD-844



YD-846

## LIMITED WARRANTY

### WARRANTY TERMS:

Subject to the Limitations of Warranty, and the Warranty Procedures, herein after set forth, YAESU ELECTRONICS CORPORATION, hereby warrants this product to be free of defects in materials and workmanship in normal use for a period of 90 days (the warranty period from the date of original purchase of this product by the original purchaser at retail).

### LIMITATIONS OF WARRANTY:

- A. This warranty is extended only to such original purchaser at retail, and shall not be valid or enforceable unless such original purchaser shall have perfected entitlement to warranty remedies by having fully completed, signed and mailed to YAESU, the owner's Warranty Registration Card, included with this product, within ten (10) days from the date of such original purchase at retail.
- B. This warranty shall be limited to repair or replacement of any materials found to be defective, any required servicing or adjustment of the product, or replacement of the product should such repair, replacement, servicing, or adjustment to be deemed by Yaesu to be ineffective. Repair or replacement of defective materials, servicing, adjustment, or replacement of the product, under the terms of this warranty, shall be performed free of charge by the Authorized Yaesu Dealer from whom this product was originally purchased.
- C. Any tampering with, misuse of, or damage for any reason to this product shall invalidate this warranty.
- D. Vacuum tubes used in the product shall not be included as materials under warranty.
- E. This warranty applies only to this product as it existed at the time of such original purchase by the original purchaser at retail, and shall not limit Yaesu's right thereafter to make any changes in design, add to, or otherwise improve Yaesu products, nor impose any obligation upon Yaesu to modify or alter this product to conform to, such changes, additions or improvements.
- F. Yaesu assumes no responsibility for any consequential damages caused by or arising out of any such defect in materials and workmanship, or with respect to any breach of any implied warranty applicable to this product.

**YAESU ELECTRONIC CORPORATION**



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TOKYO, JAPAN

**YAESU ELECTRONIC CORPORATION**  
P.O. BOX 498  
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*Specifications subject to change without notice.*

**From:**

**YAESU ELECTRONIC CORP.  
15954 DOWNEY AVE.  
PARAMOUNT, CAL. 90723**



**To:**

