

# iCHARGE™ i30

## single bay charger

Charge NiCd, NiMH or Li Ion batteries with no memory effect!



We Make Batteries Better™



An absolute necessity for your Ni-Cd, Ni-MH or Li-Ion batteries. If your two-way batteries compromise your radio communications or tie up manpower with complicated maintenance programs, it is time to get rid of your battery headaches. The iCHARGE i30 offers the fastest conditioning charge available. Additionally, iCHARGE features precise termination with no trickle charge.

Police and Fire departments, Federal and State agencies, and every branch of the United States military use the iCHARGE system.

ACT's iCHARGE i30 is the most intelligent battery charging/conditioning solution available. The entire iCHARGE line comes with our patented Dynamic Electrochemical Waveform (DEW) technology.

The cure for your battery headaches!

**Grampian Fire Brigade - Russell Smith (Comms Manager)**

"We installed an ACT charger in our local station and found that within a few weeks the number of batteries being sent back as unusable had dropped dramatically."

- **Fastest possible charge times (Ni-Cd in 15-40 minutes)**
- **Elimination of memory effect**
- **Automatically conditions battery during charge**
- **No user discipline required**
- **Interchangeable adapters**
- **Precise termination of charge**
- **For Ni-Cd, Ni-MH and Li-Ion batteries**
- **Patented DEW™ Technology**

### Technical Data:

|                                   |  |
|-----------------------------------|--|
| <b>AC input</b>                   | 115/230VAC 50/60Hz   |
| <b>DC input via supplied PSU</b>  | 19VDC – AC Adapter supplied  |
| <b>Operating temperature</b>      | 0 - 40°C   |
| <b>Humidity</b>                   | 95% non-condensing   |
| <b>Max Depolarisation Current</b> | 12A  |
| <b>Battery Range</b>              | 4 – 10 cell Ni-Cd<br>4 – 10 cell Ni-MH<br>1 – 3 cell Li-Ion                              |
| <b>Charge time</b>                | Ni-Cd typically 30 mins/AH<br>Ni-MH typically 60 mins/AH<br>Li-Ion typically 100 mins/AH |
| <b>Construction</b>               | Injection moulded plastic  |
| <b>Unit weight</b>                | 0.29 kg  |
| <b>Boxed weight</b>               | 0.5 kg   |
| <b>AC/DC Converter</b>            | 1.2kg  |
| <b>Approvals</b>                  | UL, CE, CSA  |

#### Why single chemistry adapters?

Although the iCHARGE units are tri-chemistry, ACT have found that to achieve the fastest and best charge for a specific battery, it's imperative to know exactly what battery chemistry you are charging. Most batteries do not provide this information electronically, so it's important to use single chemistry adapters to ensure the full benefits are achieved.

#### Why do you need to take the battery off the radio?

Part of the patented (DEW™) method used by ACT chargers actually measures and removes energy from the battery as it charges it.

The measurement is critical to continuously adapt the charging profile and hence ensure the best possible battery charge. The only real way this can be achieved is from the battery's radio contacts - not the traditional rear or bottom mounted charger contacts.

#### What adapters are available for the ACT charging solution?

Please call Mastercom for a list of the key ACT iCHARGE adapters. If you don't see a required adapter on the list, please contact us to check on availability.



To take advantage of the ACT charging solution please contact:

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# iCHARGE™ i70

## six-bay charger

Charge NiCd, NiMH or Li Ion batteries with no memory effect!



We Make Batteries Better™



### Wandsworth Parks Police - PC124 Cullen (Comms Officer)

"We evaluated the ACT Charger/conditioner and I have to say WOW. I'm very impressed particularly with the speed of charging - also the noticeable difference with some batteries which we nearly threw away before we re-activated them. some were beyond help but others have been given a new lease of life."

An absolute necessity for your NiCd, NiMH or Li Ion batteries. If your two-way batteries compromise your radio communications or tie up manpower with complicated maintenance programs, it is time to get rid of your battery headaches. the iCHARGE i70 offers the fastest conditioning charge available. Additionally, iCharge features precise termination with no trickle charge. Police and Fire Departments, Federal and State agencies and every branch of the US Military use the iCHARGE system. ACT's iCHARGE i70 is the most intelligent battery charging/conditioning solution available. The entire iCHARGE line comes with our patented Dynamic Electrochemical Waveform (DEW) technology.

The CURE for your battery headaches.

- **Fastest possible charge times (Ni-Cd in 15-40 minutes)**
- **Elimination of memory effect**
- **Automatically conditions battery during charge**
- **No user discipline required**
- **Interchangeable adapters**
- **Ability to charge batteries for different handsets on the same unit**
- **Rugged construction**
- **Precise termination of charge**
- **For Ni-Cd, Ni-MH and Li-Ion batteries**
- **Patented DEW™ Technology**
- **Optional analyser accessory with intelligent capacity gauge**

### Technical Data:

|                                   |  |
|-----------------------------------|--|
| <b>AC input</b>                   | 115/230VAC 50/60Hz with selector switch  |
| <b>Humidity</b>                   | 95% non-condensing   |
| <b>Max Charge Current</b>         | 2.4A   |
| <b>Max Depolarisation Current</b> | 12A  |
| <b>Battery Range</b>              | 4 – 10 cell Ni-Cd<br>4 – 10 cell Ni-MH<br>1 – 3 cell Li-Ion                              |
| <b>Charge time</b>                | Ni-Cd typically 30 mins/AH<br>Ni-MH typically 60 mins/AH<br>Li-Ion typically 100 mins/AH |
| <b>Construction</b>               | welded aluminium   |
| <b>Unit weight</b>                | 5.44 kg  |
| <b>Boxed weight</b>               | 7.7 kg   |
| <b>Approvals</b>                  | UL, CE, CSA  |

### Why single chemistry adapters?

Although the iCHARGE units are tri-chemistry, ACT have found that to achieve the fastest and best charge for a specific battery, it's imperative to know exactly what battery chemistry you are charging. Most batteries do not provide this information electronically, so it's important to use single chemistry adapters to ensure the full benefits are achieved.

### Why do you need to take the battery off the radio?

Part of the patented (DEW™) method used by ACT chargers actually measures and removes energy from the battery as it charges it. The measurement is critical to continuously adapt the charging profile and hence ensure the best possible battery charge. The only real way this can be achieved is from the battery's radio contacts - not the traditional rear or bottom mounted charger contacts.

### What adapters are available for the ACT charging solution?

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# iCHARGE™ i75

six-bay charger with Maintainor function

The charger for emergency responders!

**ACT**™  
We Make Batteries Better™



The iCHARGE i75 has all the benefits of the iCHARGE system with the added bonus of the patented Maintainor features. This is the perfect charger for any Emergency Response Team, requiring fully charged batteries stored for days, weeks or even months - but ready at a moments notice.

After charging completely, batteries that are left on the unit are individually discharged and recharged, one at a time every two weeks. Each bay is fully exercised, which keeps batteries in an optimal state and ready for your next critical assignment - after all, Emergency Responders don't get a second chance!

ACT's iCHARGE i75 is the most intelligent battery charging/conditioning solution available. The entire iCHARGE line comes with the patented Dynamic Electrochemical Waveform (DEW) technology.

The CURE for your battery headaches!

## Technical Data:

|                                   |  |
|-----------------------------------|--|
| <b>AC input</b>                   | 115/230VAC 50/60Hz with selector switch  |
| <b>Humidity</b>                   | 95% non-condensing   |
| <b>Max Charge Current</b>         | 2.4A   |
| <b>Max Depolarisation Current</b> | 12A  |
| <b>Battery Range</b>              | 4 – 10 cell Ni-Cd<br>4 – 10 cell Ni-MH<br>1 – 3 cell Li-Ion                              |
| <b>Charge time</b>                | Ni-Cd typically 30 mins/AH<br>Ni-MH typically 60 mins/AH<br>Li-Ion typically 100 mins/AH |
| <b>Construction</b>               | Welded aluminium   |
| <b>Unit weight</b>                | 5.44 kg  |
| <b>Boxed weight</b>               | 7.7 kg   |
| <b>Approvals</b>                  | UL, CE, CSA  |

### Lancashire Police - Derek Wignall (Radio Comms Department)

"We carried out a detailed evaluation of the ACT Charger, we found that it exceeded the companies claims. The ACT Charger/conditioner proved very useful in preparing the high number of batteries required to Police the recently held Conservative Party Conference at Blackpool. The speed with which it formed new batteries <2 hours and the very fast charge time of approximately 30 minutes to 100% charge meant that we significantly reduced the preparation time."

- **Fastest possible charge times (NiCd in 15-40 minutes)**
- **Ideal for emergency planners and infrequent users**
- **Elimination of memory effect**
- **Automatically conditions battery during charge**
- **No user discipline required**
- **Interchangeable adapters**
- **Ability to charge batteries for different handsets on the same unit**
- **Rugged construction**
- **Precise termination of charge**
- **For Ni-Cd, Ni-MH and Li-Ion batteries**
- **Patented DEW™ Technology**

### Why single chemistry adapters?

Although the iCHARGE units are tri-chemistry, ACT have found that to achieve the fastest and best charge for a specific battery, it's imperative to know exactly what battery chemistry you are charging. Most batteries do not provide this information electronically, so it's important to use single chemistry adapters to ensure the full benefits are achieved.

### Why do you need to take the battery off the radio?

Part of the patented (DEW™) method used by ACT chargers actually measures and removes energy from the battery as it charges it. The measurement is critical to continuously adapt the charging profile and hence ensure the best possible battery charge. The only real way this can be achieved is from the battery's radio contacts - not the traditional rear or bottom mounted charger contacts.

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# iCHARGE™ i35

## single bay vehicle charger

Charge NiCd, NiMH batteries with no memory effect!

**ACT**™  
We Make Batteries Better™



The iCHARGE i35 in-vehicle charger by ACT operates on 12 and 24 volt DC and is ideal for emergency response vehicles and mobile communication units. Now you have on site the same great benefits as the desk-top iCHARGE system, including fastest available charge, proprietary maintenance mode and interchangeable adapters.

The iCHARGE i35 can be hard-wired into the electronics of any vehicle for fast, reliable battery charging that returns your two-way radios to service quickly. The slimmed-down design mounts easily in most vehicles and the unit comes complete with mounting bracket and wiring hardware.

Great for quick, on-site recharge at emergencies, clean-up details and special events, the iCHARGE i35 proprietary maintenance mode means your battery is ready when you need it. The iCHARGE i35 supports all ACT adapters for 7.2V two-way radio batteries.

### Firefighter

"I ordered extra adapters to go with our in-vehicle iCHARGE, and most of the emergency workers in our region know it. Whenever we respond to a situation with other units, everyone comes to us to recharge their batteries, because the iCHARGE is so much quicker and easy to use."

- **Fastest possible charge times (please note that charge times with the i35 are slightly longer than the i30: 45-90 minutes)**
- **Elimination of memory effect**
- **Automatically conditions battery during charge**
- **No user discipline required**
- **Interchangeable adapters**
- **Precise termination of charge**
- **For Ni-Cd and Ni-MH batteries up to 7.2V**
- **Mounting kit supplied with in line fuse**
- **Operates from 12v DC, 24V DC or 28V DC**
- **Patented DEW™ Technology**

### Technical Data:

|                              |   |
|------------------------------|---|
| <b>Input</b>                 | 10-30Vdc<br>in line cabling as standard<br>(cigar lighter optional) |
| <b>Operating temperature</b> | 0 - 40°C  |
| <b>Humidity</b>              | 95% non-condensing  |
| <b>i35VC charge time</b>     | 45-90 minutes<br>for Ni-Cd and Ni-MH                                |
| <b>Unit weight</b>           | 0.43 kg   |
| <b>Boxed weight</b>          | 0.8 kg  |
| <b>Approvals</b>             | UL, CE, CSA, e11  |

### Why single chemistry adapters?

ACT have found that to achieve the fastest and best charge for a specific battery, it's imperative to know exactly what battery chemistry you are charging. Most batteries do not provide this information electronically, so it's important to use single chemistry adapters to ensure the full benefits are achieved.

### Why do you need to take the battery off the radio?

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# iGAUGE™

## intelligent capacity gauge

Intelligent companion for your icharge 6 bays!

# ACT™

We Make Batteries Better™



It's the perfect companion to your ACT Charger fleet!

An intelligent capacity display unit that fits underneath your existing adapter plates and delivers a precise milliamp reading of your battery's capacity - regardless of your battery's chemistry!

It's intelligent design also allows for deep conditioning of your Ni-Cd batteries through three complete discharge/recharge cycles - virtually eliminating all memory effects and simultaneously restoring lost capacity for longer battery life and increased service.

If your battery budget is getting out of hand - it's time to give those marginal cells a kick they'll remember!

Reclaim the lost cycles in your existing batteries before spending another cent on new stock - You'll be amazed at the results and the money you'll save!

### Illinois Department of Corrections - Tom Costa

"I support a number of prisons. Any time a unit can cut down on the battery budget, they're happy. We were ordering thousands of dollars worth of batteries a month. Requests for batteries have gone down a lot in the prisons that have ACT chargers, and the ones that don't have them, want them."

- **Intelligent capacity gauge**
- **Simply fits underneath an adapter on a 6 bay unit**
- **Easy to use with two buttons and an LCD screen**
- **Capacity check function**
- **ReACTivate function for older batteries**

### The three functions of the iGAUGE summarised:

#### 1. Charge-Condition Cycle

The charge-condition cycle is the default mode. If a battery is placed on the adapter the unique ACT conditioning-charge is automatically initiated within 30 seconds. If the 'Next' button is operated then the iGAUGE enters its next mode.

#### 2. Capacity Check

The capacity check function is used to ascertain the energy stored within the battery. Once the capacity function is selected the battery is discharged, accurately measured and then recharged.

#### 3. reACTivate Cycle

The reACTivate function cycles the battery three times, leaving a fully charged battery. The three discharge capacities are displayed in mAh, thus allowing the user to see if a battery is recovering capacity.

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# iCHARGE™

## battery adapters



### Lucent Technologies - Systems Technician

"I haven't heard any complaints since we got the ACT Chargers, and that's definitely good. Having the ACT Chargers has improved the usability of the batteries themselves, especially on older batteries. The emergency response team use the radios a lot, and they never have a problem with a dead battery anymore. Before, they were complaining that the batteries wouldn't last all day. We don't experience that problem anymore."

The ACT charging system uses radio model specific adaptors to interface between the battery and charging base. Apart from ensuring there are no compromises when charging a specific battery, users gain the following operational and long term upgrade benefits.

- Upgrading fleets for new radio models only requires a replacement adaptor, not the complete charger unit.
- Single and six unit chargers can be easily migrated to different radio models.
- Mixed fleets can be kept operational and easily maintained with one product. This is particularly true for the i70/i75 6 way chargers, where each bay can support a different radio model.
- Field upgrades are easily performed without specialist knowledge or tools.
- Batteries are very securely held in the adaptor using the same securing mechanism that holds the battery to the radio unit.

The majority of ACT adaptors are intended for charging single battery chemistry types, this ensures absolutely no charging compromises are made.

# iCHARGE™

## radio rack



The Radio Rack screws on to the back of either the i70 or i75 six bay chargers. This provides a useful storage area for the handsets while their batteries are being charged and conditioned.

### Why single chemistry adapters?

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